

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1756mja

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	MAR 15	WPIDS/WPIX enhanced with new FRAGHITSTR display format
NEWS	3	MAR 16	CASREACT coverage extended
NEWS	4	MAR 20	MARPAT now updated daily
NEWS	5	MAR 22	LWPI reloaded
NEWS	6	MAR 30	RDISCLOSURE reloaded with enhancements
NEWS	7	APR 02	JICST-EPLUS removed from database clusters and STN
NEWS	8	APR 30	GENBANK reloaded and enhanced with Genome Project ID field
NEWS	9	APR 30	CHEMCATS enhanced with 1.2 million new records
NEWS	10	APR 30	CA/CAPplus enhanced with 1870-1889 U.S. patent records
NEWS	11	APR 30	INPADOC replaced by INPADOCDB on STN
NEWS	12	MAY 01	New CAS web site launched
NEWS	13	MAY 08	CA/CAPplus Indian patent publication number format defined
NEWS	14	MAY 14	RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS	15	MAY 21	BIOSIS reloaded and enhanced with archival data
NEWS	16	MAY 21	TOXCENTER enhanced with BIOSIS reload
NEWS	17	MAY 21	CA/CAPplus enhanced with additional kind codes for German patents
NEWS	18	MAY 22	CA/CAPplus enhanced with IPC reclassification in Japanese patents
NEWS	19	JUN 27	CA/CAPplus enhanced with pre-1967 CAS Registry Numbers
NEWS	20	JUN 29	STN Viewer now available
NEWS	21	JUN 29	STN Express, Version 8.2, now available
NEWS	22	JUL 02	LEMBASE coverage updated
NEWS	23	JUL 02	LMEDLINE coverage updated
NEWS	24	JUL 02	SCISEARCH enhanced with complete author names
NEWS	25	JUL 02	CHEMCATS accession numbers revised
NEWS	26	JUL 02	CA/CAPplus enhanced with utility model patents from China

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 4 MAY 2007.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 15:33:13 ON 03 JUL 2007

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 15:33:25 ON 03 JUL 2007

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FILE COVERS 1907 - 3 Jul 2007 VOL 147 ISS 2

FILE LAST UPDATED: 2 Jul 2007 (20070702/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s us 2004-019684/pn

L1 0 US 2004-019684/PN  
(US2004019684/PN)

=> s us 2004-0191684/pn

L2 1 US 2004-0191684/PN  
(US2004191684/PN)

=> s us 2004-0029038/pn

L3 1 US 2004-0029038/PN  
(US2004029038/PN)

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

7.44

7.65

FILE 'REGISTRY' ENTERED AT 15:35:02 ON 03 JUL 2007

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STRUCTURE FILE UPDATES: 2 JUL 2007 HIGHEST RN 940883-34-1

DICTIONARY FILE UPDATES: 2 JUL 2007 HIGHEST RN 940883-34-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> tra rn l2

L4 TRANSFER L2 1- RN : 14 TERMS  
L5 14 L4

=> tra rn l3

L6 TRANSFER L3 1- RN : 16 TERMS  
L7 16 L6

=> s (l4 or l5) and biphenyl

484642 BIPHENYL

L9 4 (L8 OR L5) AND BIPHENYL

=> s (l4 or l5) and cayanobiphenyl

0 CAYANOBIPHENYL

L11 0 (L10 OR L5) AND CAYANOBIPHENYL

=> s (l4 or l5) and cyanobiphenyl

446 CYANOBIPHENYL

L13 2 (L12 OR L5) AND CYANOBIPHENYL

=> s (l4 or l5) and (cyanobiphenyl or biphenyl)

446 CYANOBIPHENYL

484642 BIPHENYL

L15 4 (L14 OR L5) AND (CYANOBIPHENYL OR BIPHENYL)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

25.65

57.54

FILE 'CAPLUS' ENTERED AT 15:36:15 ON 03 JUL 2007

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They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> ]s l4

]S IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> s l4

L16 18904 L4

=> s l16 and (azo or azobenzene or polyester)

78077 AZO

24 AZOS

78084 AZO

(AZO OR AZOS)

13177 AZOBENZENE

1555 AZOBENZENES

13654 AZOBENZENE

(AZOBENZENE OR AZOBENZENES)

270173 POLYESTER

239388 POLYESTERS

354847 POLYESTER

(POLYESTER OR POLYESTERS)

L17 1243 L16 AND (AZO OR AZOBENZENE OR POLYESTER)

=> s l16 and (azo)

78077 AZO

24 AZOS

78084 AZO

(AZO OR AZOS)

L18 690 L16 AND (AZO)

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

37.12

94.66

FILE 'REGISTRY' ENTERED AT 15:37:19 ON 03 JUL 2007

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DICTIONARY FILE UPDATES: 2 JUL 2007 HIGHEST RN 940883-34-1

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d his

(FILE 'HOME' ENTERED AT 15:33:13 ON 03 JUL 2007)

FILE 'CAPLUS' ENTERED AT 15:33:25 ON 03 JUL 2007

L1 0 S US 2004-019684/PN  
L2 1 S US 2004-0191684/PN  
L3 1 S US 2004-0029038/PN

FILE 'REGISTRY' ENTERED AT 15:35:02 ON 03 JUL 2007

FILE 'CAPLUS' ENTERED AT 15:35:13 ON 03 JUL 2007

L4 TRA L2 1- RN : 14 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:13 ON 03 JUL 2007

L5 14 SEA L4

FILE 'CAPLUS' ENTERED AT 15:35:17 ON 03 JUL 2007

L6 TRA L3 1- RN : 16 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:17 ON 03 JUL 2007

L7 16 SEA L6  
L8 14 S L4  
L9 4 S (L8 OR L5) AND BIPHENYL  
L10 14 S L4  
L11 0 S (L10 OR L5) AND CAYANOBIPHENYL  
L12 14 S L4  
L13 2 S (L12 OR L5) AND CYANOBIPHENYL  
L14 14 S L4  
L15 4 S (L14 OR L5) AND (CYANOBIPHENYL OR BIPHENYL)

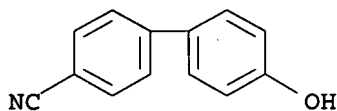
FILE 'CAPLUS' ENTERED AT 15:36:15 ON 03 JUL 2007

L16 18904 S L4  
L17 1243 S L16 AND (AZO OR AZOBENZENE OR POLYESTER)  
L18 690 S L16 AND (AZO)

FILE 'REGISTRY' ENTERED AT 15:37:19 ON 03 JUL 2007

=> d scan l15

L15 4 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN [1,1'-Biphenyl]-4-carbonitrile, 4'-hydroxy-  
MF C13 H9 N O  
CI COM



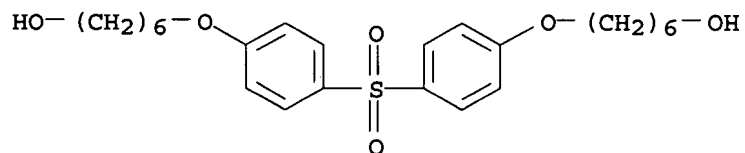
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

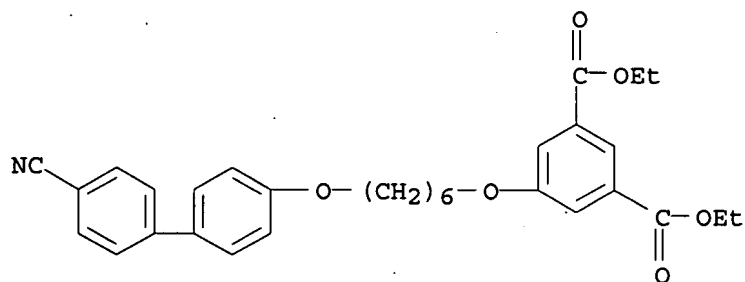
L15 4 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 1,3-Benzenedicarboxylic acid, 5-[[6-[(4'-cyano[1,1'-biphenyl]-4-yl)oxy]hexyl]oxy]-, diethyl ester, polymer with diethyl  
5-[[6-[4-[(4-methylphenyl)azo]phenoxy]hexyl]oxy]-1,3-benzenedicarboxylate  
and 6,6'-[sulfonylbis(4,1-phenyleneoxy)]bis[1-hexanol] (9CI)  
MF (C31 H36 N2 O6 . C31 H33 N O6 . C24 H34 O6 S)x

CI PMS

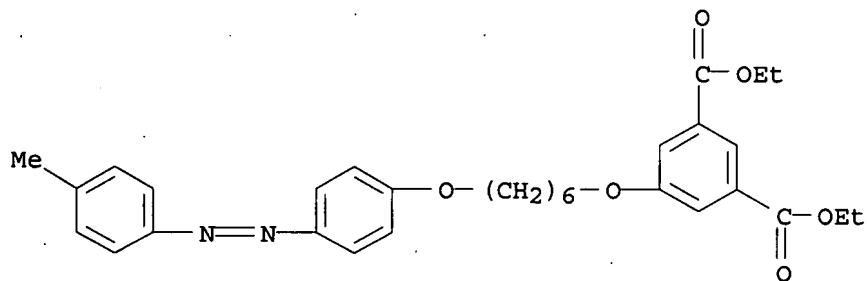
CM 1



CM 2



CM 3



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):

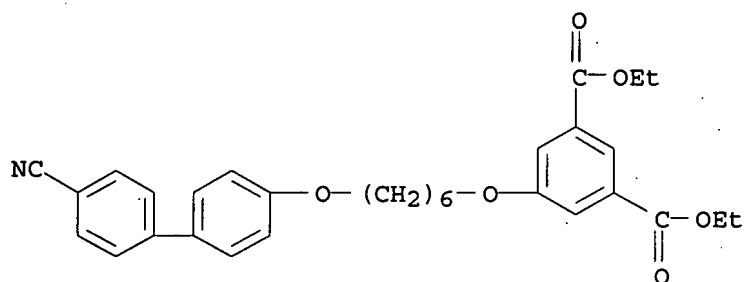
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L15 4 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN 1,3-Benzenedicarboxylic acid, 5-[[6-[(4'-cyano[1,1'-biphenyl]-4-yl)oxy]hexyl]oxy]-, diethyl ester (9CI)

MF C31 H33 N O6

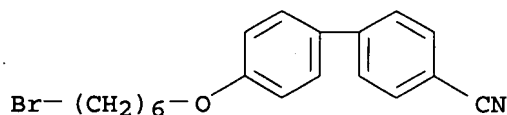
CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L15 4 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN [1,1'-Biphenyl]-4-carbonitrile, 4'-[(6-bromohexyl)oxy]-  
MF C19 H20 Br N O



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

ALL ANSWERS HAVE BEEN SCANNED

=> s l15 and benzenedicarboxylic  
102420 BENZENEDICARBOXYLIC  
L19 2 L15 AND BENZENEDICARBOXYLIC

=> d his

(FILE 'HOME' ENTERED AT 15:33:13 ON 03 JUL 2007)

FILE 'CAPLUS' ENTERED AT 15:33:25 ON 03 JUL 2007

L1 0 S US 2004-019684/PN  
L2 1 S US 2004-0191684/PN  
L3 1 S US 2004-0029038/PN

FILE 'REGISTRY' ENTERED AT 15:35:02 ON 03 JUL 2007

FILE 'CAPLUS' ENTERED AT 15:35:13 ON 03 JUL 2007  
L4 TRA L2 1- RN : 14 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:13 ON 03 JUL 2007  
L5 14 SEA L4

FILE 'CAPLUS' ENTERED AT 15:35:17 ON 03 JUL 2007  
L6 TRA L3 1- RN : 16 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:17 ON 03 JUL 2007  
L7 16 SEA L6  
L8 14 S L4  
L9 4 S (L8 OR L5) AND BIPHENYL

L10 14 S L4  
L11 0 S (L10 OR L5) AND CAYANOBIPHENYL  
L12 14 S L4  
L13 2 S (L12 OR L5) AND CYANOBIPHENYL  
L14 14 S L4  
L15 4 S (L14 OR L5) AND (CYANOBIPHENYL OR BIPHENYL)

FILE 'CAPLUS' ENTERED AT 15:36:15 ON 03 JUL 2007

L16 18904 S L4  
L17 1243 S L16 AND (AZO OR AZOBENZENE OR POLYESTER)  
L18 690 S L16 AND (AZO)

FILE 'REGISTRY' ENTERED AT 15:37:19 ON 03 JUL 2007

L19 2 S L15 AND BENZENEDICARBOXYLIC

=> s (biphenyl or cyanobiphenyl) and benzenedicarboxylic

484642 BIPHENYL

446 CYANOBIPHENYL

102420 BENZENEDICARBOXYLIC

L20 3151 (BIPHENYL OR CYANOBIPHENYL) AND BENZENEDICARBOXYLIC

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

21.60

116.26

FILE 'CAPLUS' ENTERED AT 15:39:59 ON 03 JUL 2007

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FILE COVERS 1907 - 3 Jul 2007 VOL 147 ISS 2

FILE LAST UPDATED: 2 Jul 2007 (20070702/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l19

L21 5 L19

=> d all 1-5

L21 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1260210 CAPLUS

DN 144:14188

ED Entered STN: 01 Dec 2005

TI Optical recording material, optical recording medium and optical recording/reproducing device

IN Minabe, Jiro; Yasuda, Shin; Takizawa, Hiroo

PA Fuji Xerox Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 25 pp.

CODEN: USXXCO



DT Patent  
 LA English  
 IC ICM G11B011-00  
 INCL 369013170  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005265134	A1	20051201	US 2005-37359	20050119
	JP 2005345652	A	20051215	JP 2004-163889	20040601
PRAI	JP 2004-163889	A	20040601		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005265134	ICM INCL IPCI IPCR	G11B011-00 369013170 G11B0011-00 [ICM,7] G03C0001-73 [I,C*]; G03C0001-73 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]; G11B0007-00 [I,C*]; G11B0007-0065 [I,A]; G11B0007-24 [I,C*]; G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0011-00 [I,C*]; G11B0011-00 [I,A]
	NCL ECLA	369/013.170 G11B007/0065
JP 2005345652	IPCI FTERM	G03H0001-02 [ICM,7]; G03C0001-73 [ICS,7]; G11B0007-0065 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7] 2H123/AE00; 2H123/AE01; 2K008/AA04; 2K008/BB04; 2K008/BB06; 2K008/CC01; 2K008/CC03; 2K008/DD13; 2K008/FF08; 2K008/FF17; 2K008/HH12; 2K008/HH13; 2K008/HH14; 2K008/HH26; 2K008/HH28; 5D029/JA04; 5D029/JB35; 5D029/JC02; 5D029/JC04; 5D090/AA01; 5D090/BB17; 5D090/FF11

AB The present invention provides an optical recording material for recording information by utilizing a change in absorption, a change in refractive index or a change in shape accompanying irradiation with light. The optical recording material includes a polymer or an oligomer which has a side chain containing one or more mesogenic groups and linked to a main chain and which contains two or more kinds of photoresponsive groups, each of which are different in absorption spectrum. The invention also provides an optical recording medium containing the optical recording material in a photosensitive layer. Further, the invention provides an optical recording reproduction apparatus for recording and/or reproducing information

by using the optical recording medium.

ST optical recording material medium reproducing device

IT Optical recording materials  
 (optical recording material, optical recording medium and optical recording/reproducing device)

IT 870083-09-3P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymer for optical recording material)

IT 152969-89-6P 263898-33-5P 657409-19-3P 657409-20-6P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of polymer for optical recording material)

IT 80-09-1, 4,4'-Sulfonyl diphenol 106-49-0, 4-Methylaniline, reactions 618-83-7, 5-Hydroxyisophthalic acid 629-03-8, 1,6-Dibromohexane 873-74-5, 4-Aminobenzonitrile 2009-83-8, 6-Chloro-1-hexanol 19812-93-2, 4-(Hydroxy-4'-cyanobiphenyl  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of polymer for optical recording material)

IT 2497-33-8P, 4-Hydroxy-4'-methylazobenzene 26029-68-5P,

4-Hydroxy-4'-cyanoazobenzene 39630-68-7P, Diethyl 5-hydroxyisophthalate  
114043-49-1P 137763-04-3P, 4-(6-Bromohexyloxy)-4'-cyanobiphenyl  
263898-30-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of polymer for optical recording material)

L21 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:1193282 CAPLUS  
DN 143:449426  
ED Entered STN: 10 Nov 2005  
TI Holographic recording materials comprising azo benzene polymers,  
holographic recording media, and recording/reproducing apparatus for them  
IN Minabe, Jiro; Takizawa, Hiroo  
PA Fuji Xerox Co., Ltd., Japan; Fuji Photo Film Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 33 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03H001-02  
ICS G03H001-26; G11B007-0065; G11B007-24  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 25, 38

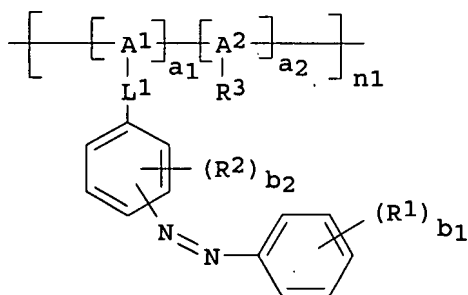
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005316279	A	20051110	JP 2004-135950	20040430
PRAI JP 2004-135950		20040430		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005316279	ICM	G03H001-02
	ICS	G03H001-26; G11B007-0065; G11B007-24
	IPCI	G03H0001-02 [ICM,7]; G03H0001-26 [ICS,7]; G11B0007-0065 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
	FTERM	2K008/AA04; 2K008/DD03; 2K008/DD12; 2K008/FF17; 5D029/JA04; 5D029/JB35; 5D029/JC03; 5D090/BB17; 5D090/CC14

GI



AB The recording materials comprise polymers having azo benzene side chains I  
[L1 = divalent connecting group; R1-2 = substituent; R3 = H, substituent;  
b1 = 2-5; b2 = 0-4; multiple R1 may form a ring; multiple R2 may form a  
ring; a1 = 0.0001-1; a2 = 0-0.9999; a1 + a2 = 1; n1 = 4-2000; A1-2 =  
[C(R11)(R12)C(R13)(L11\*)], [C(R14)(R15)C(R16)(\*)O], [COA3(\*)CO],  
[OA4(\*)O], [COA3(\*)CO], [N(R17)A4(\*)N(R18)]; \* = direct bond to be  
connected with L1 or R3; R11-13 = H, substituent; L11 = O, OCO, CONR19,

CO<sub>2</sub>, (substituted) arylene; R<sub>19</sub> = H, (cyclo)alkyl, alkenyl, aryl, heterocycle; R<sub>14-16</sub> = H, substituent; A<sub>3-4</sub> = trivalent connecting group; R<sub>17-18</sub> = H, (cyclo)alkyl, alkenyl, aryl, heterocycle]. Thus, di-Et 5-[6-[4-(4'-cyanophenyl)phenoxy]hexyloxy]isophthalate-diethyl 5-[6-[4-(3',4'-dimethylphenylazo)phenoxy]hexyloxy]isophthalate-6,6'-(4,4'-oxydiphenylenedioxy)dihexanol-6,6'-(4,4'-sulfonyldiphenylenedioxy)dihexanol copolymer was employed for holog. recording. The holog. media show small optical absorption loss, and are capable of quickly recorded by a light in wide wavelength region.

- ST holog recording material azo benzene polymer; polyester polyether polysulfone azo benzene holog; memory device holog azo benzene side chain polymer
- IT Holographic memory devices  
Holographic recording materials  
(holog. recording materials/media containing polymers bearing azo benzene side chains, and holog. recording/reproducing apparatus)
- IT Polysulfones, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyether-, holog. materials; holog. recording materials/media containing polymers bearing azo benzene side chains, and holog. recording/reproducing apparatus)
- IT Polyethers, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polysulfone-, holog. materials; holog. recording materials/media containing polymers bearing azo benzene side chains, and holog. recording/reproducing apparatus)
- IT Polyesters, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyether-polysulfone-, holog. materials; holog. recording materials/media containing polymers bearing azo benzene side chains, and holog. recording/reproducing apparatus)
- IT 95-64-7, 3,4-Dimethylaniline  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(diazotization of; in preparation of polymers bearing azo benzene side chains for holog. recording materials/media)
- IT 7632-00-0, Sodium nitrite  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(diazotizing agent; in preparation of polymers bearing azo benzene side chains for holog. recording materials/media)
- IT 868703-03-1P, Diethyl 5-[6-[4-(4'-cyanophenyl)phenoxy]hexyloxy]isophthalate-Diethyl 5-[6-[4-(3',4'-dimethylphenylazo)phenoxy]hexyloxy]isophthalate-6,6'-(4,4'-Oxydiphenylenedioxy)dihexanol-6,6'-(4,4'-Sulfonyldiphenylenedioxy)dihexanol copolymer 868703-05-3P 868703-07-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(holog. materials; holog. recording materials/media containing polymers bearing azo benzene side chains, and holog. recording/reproducing apparatus)
- IT 64-17-5, Ethanol, reactions 80-09-1, 4,4'-Sulfonyldiphenol 108-95-2, Phenol, reactions 629-03-8, 1,6-Dibromohexane 1965-09-9, 4,4'-Oxydiphenol 2009-83-8, 6-Chloro-1-hexanol 19812-93-2, 4-Hydroxy-4'-cyanobiphenyl  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in preparation of polymers bearing azo benzene side chains for holog. recording materials/media)
- IT 152969-90-9P, 6,6'-(4,4'-Oxydiphenylenedioxy)dihexanol 657409-19-3P, Diethyl [5-[6-[4-(4'-cyanophenyl)phenoxy]hexyloxy]isophthalate 657409-20-6P, 6,6'-(4,4'-Sulfonyldiphenylenedioxy)dihexanol 868703-01-9P, Diethyl 5-[6-[4-(3',4'-dimethylphenylazo)phenoxy]hexyloxy]isophthalate  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and copolymn. of; in preparation of polymers bearing azo benzene

side chains for holog. recording materials/media)  
 IT 39630-68-7P, Diethyl 5-hydroxyisophthalate 137763-04-3P,  
 4-(6-Bromohexyloxy)-4'-cyanobiphenyl 195374-48-2P 868703-00-8P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction of; in preparation of polymers bearing azo  
 benzene side  
 chains for holog. recording materials/media)

L21 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:1193266 CAPLUS  
 DN 143:449425  
 ED Entered STN: 10 Nov 2005  
 TI Optical recording apparatus, medium, and material using polymer with  
 azobenzene structure  
 IN Minabe, Jiro; Takizawa, Hiroo  
 PA Fuji Xerox Co., Ltd., Japan; Fuji Photo Film Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03H001-02  
 ICS G03H001-26; G11B007-0065; G11B007-24  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38

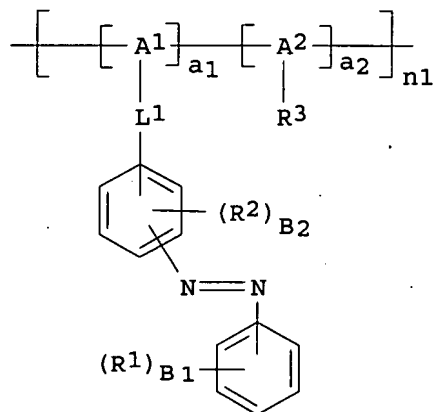
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005316278	A	20051110	JP 2004-135949	20040430
PRAI JP 2004-135949		20040430		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005316278	ICM	G03H001-02
	ICS	G03H001-26; G11B007-0065; G11B007-24
	IPCI	G03H0001-02 [ICM,7]; G03H0001-26 [ICS,7]; G11B0007-0065 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
	FTERM	2K008/AA04; 2K008/DD03; 2K008/DD12; 2K008/FF17; 5D029/JA04; 5D029/JB35; 5D029/JC03; 5D090/BB17; 5D090/CC14

GI



AB The material contains the polymer I (L1 = divalent linkage; R1-2 =

substituent; R3 = H, substituent; b1, b2 = 0-4; a1 = 0.0001-1; a2 = 0-0.9999; a1 + a2 = 1; n1 = 4-2000; A1-2 = CR11R12CR13L11, CR14R15CR16O, COA3CO; OA4O, NR17A4NR18; R11-13 = H, substituent; L11 = O, OCO, CONR19, CO2, arylene; R17-R19 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocycle; R14-16 = H, substituent; A3-4 = trivalent linkage). The medium and the apparatus comprising the material is recorded by using the change of absorption, refractive index, or shape caused by light irradiation. The material may be recorded by holog. The material has high d. memory, high speed recording without light absorption loss in wide wavelength range.

ST holog recording material polymer azobenzene

IT Holography

(volume holog. recording material using polymer with azobenzene structure)

IT Holographic recording materials

(volume; volume holog. recording material using polymer with azobenzene structure)

IT 6676-96-6P 39630-68-7P, Diethyl 5-hydroxyisophthalate 137763-04-3P, 4-(6-Bromohexyloxy)-4'-cyanobiphenyl 868682-26-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of monomer of polymer with azobenzene structure for holog. recording material)

IT 64-17-5, Ethanol, reactions 80-09-1, 4,4'-Sulfonyl diphenol 108-44-1, 3-Methylaniline, reactions 108-95-2, Phenol, reactions 618-83-7, 5-Hydroxyisophthalic acid 629-03-8, 1,6-Dibromohexane 1965-09-9, 4,4'-Oxydiphenol 2009-83-8, 6-Chloro-1-hexanol 19812-93-2, 4-Hydroxy-4'-cyanobiphenyl

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of monomer of polymer with azobenzene structure for holog. recording material)

IT 152969-90-9P 657409-19-3P 657409-20-6P 868682-25-1P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of polymer with azobenzene structure for holog. recording material)

IT 868682-22-8P 868682-24-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(volume holog. recording material using polymer with azobenzene structure)

L21 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:802417 CAPLUS

DN 141:322680

ED Entered STN: 01 Oct 2004

TI Optical recording medium made from polyester and method for producing the same

IN Maruyama, Tatsuya; Kawano, Katsunori; Minabe, Jiro; Yasuda, Shin; Matsui, Norie; Ishii, Tsutomu; Hama, Kazuhiro

PA Fuji Xerox Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 21 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM G11B005-58

INCL 430270110

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004191684	A1	20040930	US 2004-805355	20040322
	JP 2004310999	A	20041104	JP 2004-38694	20040216
PRAI	JP 2003-81291	A	20030324		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004191684	ICM	G11B005-58
	INCL	430270110
	IPCI	G11B0005-58 [ICM,7]
	IPCR	G03C0001-73 [I,C*]; G03C0001-73 [I,A]; C08G0063-00 [I,C*]; C08G0063-685 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]; G11B0007-24 [I,C*]; G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-245 [I,A]; G11B0007-26 [I,C*]; G11B0007-26 [I,A]; G11B0017-04 [I,C*]; G11B0017-04 [I,A]
	NCL	430/270.110
	ECLA	G11B007/245; G11B017/04D1B
JP 2004310999	IPCI	G11B0007-24 [ICM,7]; C08G0063-685 [ICS,7]; C08G0063-00 [ICS,7,C*]; G03C0001-73 [ICS,7]; G03H0001-02 [ICS,7]; G11B0007-26 [ICS,7]
	IPCR	G11B0017-04 [I,A]; G11B0017-04 [I,C*]
	FTERM	2H123/AA00; 2H123/AA04; 2H123/AA30; 2H123/AE00; 2H123/AE01; 2H123/FA00; 2H123/FA05; 2K008/AA04; 2K008/DD12; 2K008/FF17; 4J029/AA03; 4J029/AB01; 4J029/AC02; 4J029/AE05; 4J029/AE18; 4J029/BB04A; 4J029/BB05A; 4J029/BB11A; 4J029/BC03A; 4J029/BC06A; 4J029/BF12; 4J029/BF23; 4J029/BH02; 4J029/CA02; 4J029/CA04; 4J029/CA05; 4J029/CA09; 4J029/CB01; 4J029/CB05B; 4J029/CB06B; 4J029/CC03B; 4J029/CC05B; 4J029/CF07; 4J029/CF08; 4J029/CF14; 4J029/CG09Y; 4J029/CH01; 4J029/CH02; 4J029/DA01; 4J029/DA07; 4J029/DA08; 4J029/DA09; 4J029/DB11; 4J029/DB13; 5D029/JA04; 5D029/JB50; 5D121/AA01; 5D121/AA04; 5D121/EE30; 5D121/FF06

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Disclosed is an optical recording medium including a recording layer which is formed into a predetd. shape with a thickness of 0.1 mm to 5 mm and which contains a polyester represented by I (R<sub>1,2</sub> = H, substituent; b<sub>1</sub> = 0-5; b<sub>2</sub> = 0-4; L<sub>12-14</sub> = divalent linking group; A<sub>5</sub> = trivalent group; a<sub>3</sub> = 0.0001-1; a'<sub>3</sub> = 0-1; a<sub>4</sub> = 0-0.9999; a'<sub>4</sub> = 0-1; a<sub>3</sub> + a<sub>4</sub> = 1; a'<sub>3</sub> + a'<sub>4</sub> = 1; and n<sub>1</sub> = 4-2,000 ).

ST optical recording disk polyester

IT Optical disks

(optical recording medium made from polyester)

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)

(optical recording medium made from polyester)

IT 657409-22-8P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP

(Preparation); USES (Uses)

(optical recording medium made from polyester)

IT 80-09-1, 4,4'-Sulfonyldiphenol 106-49-0, 4-Methylaniline, reactions

618-83-7, 5-Hydroxyisophthalic acid 629-03-8, 1,6-Dibromohexane

2009-83-8, 6-Chloro-1-hexanol 19812-93-2, 4-Hydroxy-4'-cyanobiphenyl

RL: RCT (Reactant); RACT (Reactant or reagent)

(optical recording medium made from polyester)

IT 2497-33-8P, 4-Hydroxy-4'-methylazobenzene 39630-68-7P, Diethyl

5-hydroxyisophthalate 137763-04-3P, 4-(6-Bromohexyloxy)-4'-cyanobiphenyl

263898-30-2P 263898-33-5P 657409-19-3P 657409-20-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(optical recording medium made from polyester)

L21 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:119849 CAPLUS  
DN 140:190051  
ED Entered STN: 13 Feb 2004  
TI Photo-responsive high-molecular compound containing dicarboxylic acid monomer for optical recording medium and optical record reproducing device  
IN Minabe, Jiro; Maruyama, Tatsuya; Kawano, Katsunori; Yasuda, Shin  
PA Fuji Xerox Co., Ltd., Japan  
SO U.S. Pat. Appl. Publ., 32 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM G03C001-492  
INCL 430270100  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004029038	A1	20040212	US 2003-454690	20030605
	JP 2004059897	A	20040226	JP 2003-126692	20030501
PRAI	JP 2002-167796	A	20020607		
	JP 2003-126692	A	20030501		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004029038	ICM	G03C001-492
	INCL	430270100
	IPCI	G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]
	IPCR	G02B0005-32 [I,C*]; G02B0005-32 [I,A]; C08G0063-00 [I,C*]; C08G0063-181 [I,A]; C08L0067-00 [I,C*]; C08L0067-02 [I,A]; G03C0001-73 [I,C*]; G03C0001-73 [I,A]; G11B0007-24 [I,C*]; G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-25 [I,A]
	NCL	430/270.100
	ECLA	G11B007/25
JP 2004059897	IPCI	C08G0063-181 [ICM,7]; C08G0063-00 [ICM,7,C*]; C08L0067-02 [ICS,7]; C08L0067-00 [ICS,7,C*]; G02B0005-32 [ICS,7]; G03C0001-73 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	G11B0007-24 [I,C*]; G11B0007-25 [I,A]
	FTERM	2H049/CA20; 2H049/CA30; 2H123/AA00; 2H123/AA03; 2H123/BA00; 2H123/BA01; 2H123/BA16; 4J002/CF13W; 4J002/CF13X; 4J002/CF14W; 4J002/CF14X; 4J002/GS00; 4J029/AA03; 4J029/AB01; 4J029/AC02; 4J029/AC03; 4J029/AD09; 4J029/AD10; 4J029/AE18; 4J029/BE04; 4J029/BF13; 4J029/BF20; 4J029/BH02; 4J029/CB05B; 4J029/CF01; 4J029/CH01; 4J029/DA01; 4J029/DA04; 4J029/DB13; 4J029/HA01; 4J029/HB01; 4J029/HB03A; 4J029/HB04A; 4J029/HB04B; 4J029/HB05; 5D029/JA04; 5D029/JB35

OS MARPAT 140:190051

AB In the present invention, a photosensitive layer of an optical recording medium includes a photo-responsive high-mol. compound comprising a photo-responsive group (e.g., an azobenzene derivative) which is geometrically isomerized by light radiation, and a liquid crystal linear mesogen group (e.g., a biphenyl derivative), wherein the photo-responsive group and the linear mesogen group are resp. bonded as side chains. The invention provides an optical recording medium enabling large scale recording by making the photosensitive layer thick without impairing recording characteristics. The photo-responsive high-mol. compound preferably comprises an aromatic ring on a main chain. Further, the photo-responsive

high-mol. compound preferably comprises a structural unit which is capable of forming a liquid-crystalline or crystalline polymer and a structural unit which is

capable of forming an amorphous polymer.

ST photoresponsive dicarboxylic acid holog recording material

IT Holographic recording materials

Light-sensitive materials

Optical recording materials

(photo-responsive high-mol. compound for optical record reproducing device)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(photo-responsive high-mol. compound for optical record reproducing device)

IT 263898-33-5P 657409-19-3P 657409-20-6P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(photo-responsive high-mol. compound for optical record reproducing device)

IT 657409-21-7P 657409-22-8P 657409-23-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(photo-responsive high-mol. compound for optical record reproducing device)

IT 80-09-1, 4,4'-Sulfonyldiphenol 104-94-9; 4-Methoxyaniline 618-83-7,

5-Hydroxyisophthalic acid 629-03-8, 1,6-Dibromohexane 2009-83-8,

6-Chloro-1-hexanol 19812-93-2, 4-Hydroxy-4'-cyanobiphenyl

RL: RCT (Reactant); RACT (Reactant or reagent)

(photo-responsive high-mol. compound for optical record reproducing device)

IT 2497-33-8P, 4-Hydroxy-4'-methylazobenzene 39630-68-7P, Diethyl

5-hydroxyisophthalate 137763-04-3P, 4-(6-Bromohexyloxy)-4'-cyanobiphenyl

263898-30-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(photo-responsive high-mol. compound for optical record reproducing device)

=> s 120

L22 3840 L20

=> s 122 and (azo or azobenzene or polyester)

78077 AZO

24 AZOS

78084 AZO

(AZO OR AZOS)

13177 AZOBENZENE

1555 AZOBENZENES

13654 AZOBENZENE

(AZOBENZENE OR AZOBENZENES)

270173 POLYESTER

239388 POLYESTERS

354847 POLYESTER

(POLYESTER OR POLYESTERS)

L23 2725 L22 AND (AZO OR AZOBENZENE OR POLYESTER)

=> s 122 and (azo or azobenzene)

78077 AZO

24 AZOS

78084 AZO

(AZO OR AZOS)

13177 AZOBENZENE

1555 AZOBENZENES

13654 AZOBENZENE

(AZOBENZENE OR AZOBENZENES)



L24 34 L22 AND (AZO OR AZOBENZENE)

=> d his

(FILE 'HOME' ENTERED AT 15:33:13 ON 03 JUL 2007)

FILE 'CAPLUS' ENTERED AT 15:33:25 ON 03 JUL 2007

L1 0 S US 2004-019684/PN  
L2 1 S US 2004-0191684/PN  
L3 1 S US 2004-0029038/PN

FILE 'REGISTRY' ENTERED AT 15:35:02 ON 03 JUL 2007

FILE 'CAPLUS' ENTERED AT 15:35:13 ON 03 JUL 2007  
L4 TRA L2 1- RN : 14 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:13 ON 03 JUL 2007

L5 14 SEA L4

FILE 'CAPLUS' ENTERED AT 15:35:17 ON 03 JUL 2007

L6 TRA L3 1- RN : 16 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:17 ON 03 JUL 2007

L7 16 SEA L6  
L8 14 S L4  
L9 4 S (L8 OR L5) AND BIPHENYL  
L10 14 S L4  
L11 0 S (L10 OR L5) AND CAYANOBIPHENYL  
L12 14 S L4  
L13 2 S (L12 OR L5) AND CYANOBIPHENYL  
L14 14 S L4  
L15 4 S (L14 OR L5) AND (CYANOBIPHENYL OR BIPHENYL)

FILE 'CAPLUS' ENTERED AT 15:36:15 ON 03 JUL 2007

L16 18904 S L4  
L17 1243 S L16 AND (AZO OR AZOBENZENE OR POLYESTER)  
L18 690 S L16 AND (AZO)

FILE 'REGISTRY' ENTERED AT 15:37:19 ON 03 JUL 2007

L19 2 S L15 AND BENZENEDICARBOXYLIC  
L20 3151 S (BIPHENYL OR CYANOBIPHENYL) AND BENZENEDICARBOXYLIC

FILE 'CAPLUS' ENTERED AT 15:39:59 ON 03 JUL 2007

L21 5 S L19  
L22 3840 S L20  
L23 2725 S L22 AND (AZO OR AZOBENZENE OR POLYESTER)  
L24 34 S L22 AND (AZO OR AZOBENZENE)

=> s l24 not l21

L25 31 L24 NOT L21

=> d all 1-31

L25 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1261312 CAPLUS

DN 144:14191

ED Entered STN: 02 Dec 2005

TI Optical recording materials and rewritable optical recording medium for volumetric recording of holograms

IN Furuki, Makoto; Minabe, Jiro; Kono, Katsunori; Takizawa, Hiroo

PA Fuji Xerox Co., Ltd., Japan; Fuji Photo Film Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03H001-02  
ICS G03C001-73  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005331763	A	20051202	JP 2004-150801	20040520
PRAI	JP 2004-150801		20040520		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 2005331763	ICM	G03H001-02
		ICS	G03C001-73
		IPCI	G03H0001-02 [ICM,7]; G03C0001-73 [ICS,7]
		FTERM	2H123/AE00; 2H123/AE01; 2H123/BA00; 2H123/BA01; 2H123/FA05; 2K008/AA04; 2K008/BB05; 2K008/DD12; 2K008/EE07; 2K008/FF17; 2K008/HH01; 2K008/HH06; 2K008/HH13; 2K008/HH14; 2K008/HH28
AB	The materials include polymers having (1) light-sensitive groups showing geometrical isomerization by irradiation of light and (2) dye moieties having maximum absorption peak near the wavelength of the recording light and having molar absorption coefficient of $\leq 50$ for recording wavelength as side chains. Also claimed are materials containing polymers with the light-sensitive side chains and dyes or polymers with the dye-moiety side chains. Recording materials including the materials as the light-sensitive layers are also claimed. Preferable structural repeating units for the polymers are also given. The materials have high sensitivity and high diffraction efficiency and can be formed into thick films for high capacity recording.		
ST	rewritable optical recording material dye photosensitive isomerization polymer; volumetric optical recording hologram photosensitive isomerization polymer		
IT	Diastereomers (geometric; rewritable optical recording materials for volumetric recording of holograms including polymers containing photosensitive isomer side chains and dye-moiety side chains or dyes)		
IT	Polysulfones, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-; rewritable optical recording materials for volumetric recording of holograms including polymers containing photosensitive isomer side chains and dye-moiety side chains or dyes)		
IT	Polyesters, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polysulfone-; rewritable optical recording materials for volumetric recording of holograms including polymers containing photosensitive isomer side chains and dye-moiety side chains or dyes)		
IT	Azo dyes Cyanine dyes Dyes Optical disks Optical recording materials (rewritable optical recording materials for volumetric recording of holograms including polymers containing photosensitive isomer side chains and dye-moiety side chains or dyes)		
IT	869852-52-8P	869852-53-9P	869852-54-0P 869852-56-2P 869852-58-4P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (rewritable optical recording materials for volumetric recording of holograms including polymers containing photosensitive isomer side chains and dye-moiety side chains or dyes)

L25 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:1041196 CAPLUS  
 DN 143:356705  
 ED Entered STN: 29 Sep 2005  
 TI Holographic recording material containing specific azobenzene  
 -based polymer compound, holographic recording medium with little optical  
 absorption loss, and holographic recording method  
 IN Kono, Katsunori; Takizawa, Hiroo  
 PA Fuji Xerox Co., Ltd., Japan; Fuji Photo Film Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 33 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03H001-02  
 ICS C08G063-685; G03F007-004; G03H001-26; G11B007-0065  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38

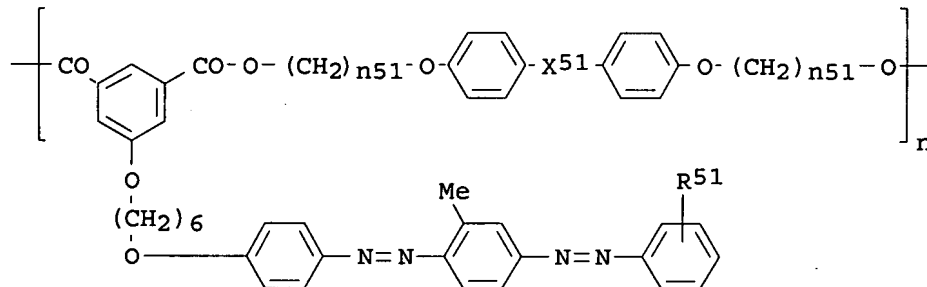
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005266603	A	20050929	JP 2004-81610	20040319
PRAI JP 2004-81610		20040319		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005266603	ICM	G03H001-02
	ICS	C08G063-685; G03F007-004; G03H001-26; G11B007-0065
	IPCI	G03H0001-02 [ICM,7]; C08G0063-685 [ICS,7]; C08G0063-00 [ICS,7,C*]; G03F0007-004 [ICS,7]; G03H0001-26 [ICS,7]; G11B0007-0065 [ICS,7]; G11B0007-00 [ICS,7,C*]
	IPCR	C08G0063-00 [I,C*]; C08G0063-685 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03H0001-02 [I,A]; G03H0001-02 [I,C*]; G03H0001-26 [I,A]; G03H0001-26 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0065 [I,A]
	FTERM	2H025/AA02; 2H025/AB14; 2H025/AC08; 2H025/BH00; 2H025/BH05; 2H025/CB41; 2K008/BB04; 2K008/CC01; 2K008/DD12; 2K008/EE01; 2K008/FF07; 2K008/FF17; 2K008/HH18; 4J029/AA03; 4J029/AB07; 4J029/AC02; 4J029/AD10; 4J029/AE05; 4J029/AE18; 4J029/BA04; 4J029/BB01; 4J029/BE03; 4J029/BF16; 4J029/BF21; 4J029/BF23; 4J029/BH02; 4J029/CA06; 4J029/CB05B; 4J029/DB13; 5D090/AA01; 5D090/BB03; 5D090/BB17; 5D090/BB18; 5D090/CC01; 5D090/DD01; 5D090/FF11; 5D090/KK00; 5D090/KK12; 5D090/KK14; 5D090/LL01

GI



I

AB The present inventions relate to a holog. recording material containing a sp. polymer compound such as the one represented by I (R51 = H, substituent; X51 = O, CO, SO<sub>2</sub>; n = integer; and n51 = integer).

ST holog recording contg specific azobenzene polymer compd medium little

IT Holographic recording materials  
Holography  
(Holog. recording material with little optical absorption loss containing specific azobenzene-based polymer compound)

IT 865813-13-4 865813-15-6  
RL: DEV (Device component use); EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(Holog. recording material with little optical absorption loss containing specific azobenzene-based polymer compound)

IT 866719-42-8  
RL: DEV (Device component use); EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(holog. recording material with little optical absorption loss containing specific azobenzene-based polymer compound)

L25 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:455277 CAPLUS

DN 144:301910

ED Entered STN: 29 May 2005

TI The crystalline effect on holographic recording stability of azopolymers

AU Yoshizawa, Hisae; Minabe, Jiro; Kawano, Katsunori

CS Corporate Research Laboratory, Fuji Xerox Co., Ltd., Nakai-machi, Ashigarakami-gun, Kanagawa, 259-0157, Japan

SO Proceedings of SPIE-The International Society for Optical Engineering (2005), 5742 (Practical Holography XIX), 242-249  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

AB The crystallinity of azobenzene-group containing polymers (azo-polymers) can be optimized for stable holog. recordings by controlling the ratio of crystalline unit of the main chain of azo-polymers. The authors synthesized several azo-polymers with the different ratios of crystalline and amorphous moieties of the main chain. Those polymers clearly had different crystallinity depending on the ratios. The authors measured their photoinduced birefringence, which contributes to the formation of a hologram, and evaluated their photosensitivity defined as the growth speed of the birefringence. The authors also examined the relaxation properties of the induced birefringence after the recording. As a result, the authors found that the azo-polymer of which the main chain consisted of 90% crystalline moieties and 10% amorphous moieties represented the best sensitivity performance. After irradiation, the birefringence relaxation for it was suppressed to one eighth of that for a 100% amorphous azo-polymer. Furthermore, TEM image revealed that several microcrystals less than 20 nm in diameter, which caused negligible light scattering, existed in this 90% crystalline azo-polymer. The microcrystal domains seemed to help the azobenzene moieties maintain the orientation, which resulted in the stabilization of the recorded birefringence.

ST crystallinity effect azobenzene group polymer holog recording

IT Crystallinity  
Glass transition temperature  
Holographic recording materials  
Holography  
Light scattering  
Microcrystallites  
(effect of crystallinity of azobenzene-group containing polymers)

on holog. recording stability)

IT Birefringence  
(photoinduced; effect of crystallinity of azobenzene-group  
containing polymers on holog. recording stability)

IT 865263-44-1  
RL: PRP (Properties); TEM (Technical or engineered material use); USES  
(Uses)  
(effect of crystallinity of azobenzene-group containing polymers  
on holog. recording stability)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L25 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:824507 CAPLUS

DN 142:198596

ED Entered STN: 08 Oct 2004

TI Liquid crystalline homopolyesters having main chain calamitic mesogens and  
one or two side chain azobenzene moieties in the repeat units

AU Sato, Moriyuki; Mizoi, Miyuki; Yano, Hiroko

CS Department of Material Science, Faculty of Science and Engineering,  
Shimane University, Matsue, 690-8504, Japan

SO Liquid Crystals (2004), 31(9), 1219-1226

CODEN: LICRE6; ISSN: 0267-8292

PB Taylor & Francis Ltd.

DT Journal

LA English

CC 36-3 (Physical Properties of Synthetic High Polymers)  
Section cross-reference(s): 35, 75

AB Combined semi-rigid homopolyesters, containing both main chain calamitic  
mesogens and one or two side chain azobenzene units separated by  
aliphatic (hexamethylene, octamethylene and decamethylene) chains in the  
polymer repeat units, were prepared and their liquid crystalline properties  
characterized. Polyesters having two side chain azobenzene  
units and a main chain biphenyl moiety showed a higher ordered smectic B  
or smectic F phase, whereas the other polymers containing a main chain  
2,5-diphenyl-1,3,4-thiadiazole unit and one or two side chain  
methoxyazobenzene units formed a smectic C phase despite the presence of  
different mesogens in the main and side chains. This is probably due to  
the compact mol. chain-packing and intra- and intermol. interactions  
between the polymer backbones and the two azobenzene units.

ST smectic liq cryst polyester azo side chain

IT Phase transition enthalpy  
(liquid crystalline homopolyesters having main chain calamitic mesogens and

- one or two side chain azobenzene moieties in the repeat units)
- IT Polyesters, properties  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)
- IT Liquid crystals, polymeric  
(smectic; liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)
- IT Liquid crystals, polymeric  
(transitions; liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)
- IT 412961-72-9 412961-73-0 839675-30-8 839675-31-9 839675-32-0  
839675-33-1 839675-34-2 839675-35-3 839675-36-4 839675-37-5  
839675-38-6 839675-39-7 839675-41-1 839675-42-2  
839675-43-3 839675-44-4  
RL: PRP (Properties)  
(liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)
- IT 5870-38-2, Diethyl 2,5-dihydroxyterephthalate 839675-45-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer synthesis; liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)
- IT 839675-40-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(monomer; liquid crystalline homopolyesters having main chain calamitic mesogens and one or two side chain azobenzene moieties in the repeat units)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L25 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:697142 CAPLUS

DN 141:332745

ED Entered STN: 26 Aug 2004

TI Relationships between structures and liquid crystalline and optical properties in combined-type copolyisophthalates having nitro- and methoxyazobenzene units and aliphatic spacers in the side chain

AU Sato, Moriyuki; Mizoi, Miyuki

CS Department of Material Science, Faculty of Science and Engineering, Shimane University, Matsue, 690-8504, Japan

SO Polymer Journal (Tokyo, Japan) (2004), 36(8), 607-616

CODEN: POLJB8; ISSN: 0032-3896

PB Society of Polymer Science, Japan

DT Journal

LA English

CC 36-5 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 35, 75

AB Combined-type thermotropic liquid crystalline (LC) homo- and copolyisophthalates

having nitro- and methoxyazobenzene units and three aliphatic spacers (hexamethylene, octamethylene and decamethylene) in the side chain and biphenyl unit in the main chain were prepared by melt polycondensation and relationships between polymer structures and LC and optical properties were discussed. Differential scanning calorimetry (DSC) measurements, optical texture observations using polarizing microscopy and powder X-Ray analyses indicated that the homopolyisophthalates with the nitroazobenzene unit form highly ordered smectic E phase and the other homo- and copolymers show less ordered smectic B or smectic C phase. The temperature ranges of smectic LC phases in the polymers decreased with increasing the methoxyazobenzene content. In these polymers, specific interaction such as electron donor-acceptor interaction between the nitro- and the methoxyazobenzene units plays no role in the formation and the stabilization of smectic LC phases. All the polymers displayed UV-vis absorption peak maxima on the basis of the azobenzenes or the biphenyl in solns. and in films, but no fluorescent properties were found, probably due to intra- and intermol. quenching.

ST optical property liq cryst polyester chain structure effect; liq cryst polyester nitro methoxyazobenzene moiety aliph spacer

IT Polyethers, properties

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polyester-; relationships between structures and liquid crystalline and optical properties in combined-type copolyisophthalates having nitro- and methoxyazobenzene units and aliphatic spacers in the side chain)

IT Polyesters, properties

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polyether-; relationships between structures and liquid crystalline and optical properties in combined-type copolyisophthalates having nitro- and methoxyazobenzene units and aliphatic spacers in the side chain)

IT Glass transition temperature

Phase transition enthalpy

UV and visible spectra

(relationships between structures and liquid crystalline and optical properties in combined-type copolyisophthalates having nitro- and methoxyazobenzene units and aliphatic spacers in the side chain)

IT Liquid crystals, polymeric

(smectic; relationships between structures and liquid crystalline and

optical

properties in combined-type copolyisophthalates having nitro- and methoxyazobenzene units and aliphatic spacers in the side chain)

IT Liquid crystals

(transitions; relationships between structures and liquid crystalline and optical properties in combined-type copolyisophthalates having nitro-

and methoxyazobenzene units and aliphatic spacers in the side chain)

IT 412961-25-2P 412961-34-3P 412961-41-2P 412961-46-7P 773127-74-5P  
773127-75-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer; relationships between structures and liquid crystalline and  
optical  
properties in combined-type copolyisophthalates having nitro- and  
methoxyazobenzene units and aliphatic spacers in the side chain)

IT 39630-68-7 129121-81-9 149474-78-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant in monomer preparation; relationships between structures and  
liquid  
crystalline and optical properties in combined-type copolyisophthalates  
having nitro- and methoxyazobenzene units and aliphatic spacers in the  
side chain)

IT 412961-56-9P 412961-59-2P 412961-61-6P 412961-63-8P  
412961-65-0P 412961-66-1P 412961-68-3P  
773127-76-7P 773127-79-0P 773127-80-3P  
773127-82-5P 773127-84-7P 773127-86-9P  
773127-90-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(relationships between structures and liquid crystalline and optical  
properties in combined-type copolyisophthalates having nitro- and  
methoxyazobenzene units and aliphatic spacers in the side chain)

IT 412961-70-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(relationships between structures and liquid crystalline and optical  
properties in combined-type copolyisophthalates having nitro- and  
methoxyazobenzene units and aliphatic spacers in the side chain)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L25 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:230878 CAPLUS

DN 141:24221



ED Entered STN: 22 Mar 2004

TI Polyimide orientation layers prepared from lyotropic poly(amic ethyl ester)s

AU Neuber, Christian; Giesa, Reiner; Schmidt, Hans-Werner

CS Macromolecular Chemistry I and Bayreuth Center for Colloids and Interfaces (BZKG), University of Bayreuth, Bayreuth, 95440, Germany

SO PMSE Preprints (2004), 90, 294-295  
CODEN: PPMRA9; ISSN: 1550-6703

PB American Chemical Society

DT Journal; (computer optical disk)

LA English

CC 36-5 (Physical Properties of Synthetic High Polymers)  
Section cross-reference(s): 75

AB Lyotropic precursor polymer solns. were used to obtain bulk oriented polyimide thin films under shear. A special shearing technique was developed and optimized to orient viscous solns. into thin films with thicknesses below 100 nm. The produced films were thermally imidized and characterized by polarized light microscopy and by polarized FT-IR spectroscopy before and after imidization. The dichroic ratio (DR) before imidization was 5 as determined by FTIR; after imidization the DR increased to 14. The shear oriented layers showed a surface profile in form of striations, which was characterized by mech. surface scanning and AFM. The profile height was determined in the nm- and the distance in the mm-range, thus a magnitude larger than the film thickness. To quantify and compare the orientation potential of the obtained orientation layers, cells with a liquid crystal host and a dichroic azo dye as guest were prepared

ST polyimide oriented layer prepn lyotropic polyamic ester shear imidization; surface morphol dichroism polyimide shear oriented layer

IT Polyimides, properties  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
(aromatic, fluorine-containing; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Liquid crystals, polymeric  
(lyotropic; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Liquid crystals  
(nematic; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Fluoropolymers, properties  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
(polyimide-, aromatic; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Circular dichroism  
Molecular orientation  
Shear  
(shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Polymer morphology  
(surface; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT Imidation  
(thermal; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT 588709-05-1  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
(azo dye; shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

IT 40817-08-1, 4-Pentyl-4'-cyanobiphenyl 143969-59-9 143969-64-6  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
(shearing method and thermal imidization to produce oriented polyimide layers from lyotropic poly(amic Et ester)s)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L25 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:409730 CAPLUS

DN 139:214938

ED Entered STN: 29 May 2003

TI Polyimide orientation layers prepared from lyotropic aromatic poly(amic ethyl ester)s

AU Neuber, Christian; Giesa, Reiner; Schmidt, Hans-Werner

CS Macromolecular Chemistry I and Bayreuth Center for Colloids and Interfaces (BZKG), University of Bayreuth, Bayreuth, D-95440, Germany

SO Advanced Functional Materials (2003), 13(5), 387-391

CODEN: AFMDC6; ISSN: 1616-301X

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

CC 36-2 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 75

AB The synthesis and characterization of liquid-crystalline precursor polymer solns.

for polyamides permit for the first time the preparation of bulk- and surface-oriented polyimide thin films from the nematic lyotropic state by shear. A special shearing technique was developed and optimized to orient viscous solns. into thin films with thicknesses below 100 nm. The films produced were thermally imidized and characterized by polarized light microscopy, and polarized FTIR and UV-vis spectroscopy before and after imidization. The dichroic ratios (DRs) before imidization were determined as 5 by FTIR, and 4.5 by UV-vis spectroscopies. After imidization the DRs increased to 14 and 7, resp. The shear-oriented layers possess a surface profile in the form of striations, which was characterized by mech. surface scanning and atomic force microscopy (AFM). The profile height was determined in the nanometer range in contrast to the profile distance in the micrometer range thus the latter is a magnitude larger than the film thickness. To quantify and compare the orientation potential of the obtained orientation layers, cells with a liquid-crystalline host and a

dichroic

azo dye as guest were prepared Interesting for this class of rod-like polyimides is that layers, which were cast from low concentration isotropic solns. and rubbed, exhibited an almost doubled DR of 15 compared to analogously prepared alignment layers based on com. flexible polyimide systems (DR = 8).

ST polyimide orientation lyotropic arom polyamic Et ester shearing

IT Polyamic acids

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(fluorine-containing, esters; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Polyimides, properties

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(fluorine-containing; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Liquid crystals, polymeric

(lyotropic cholesteric; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Liquid crystals  
(nematic; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Polymer chains  
(orientation; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Fluoropolymers, properties  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(polyamic acid-, esters; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Azo dyes  
Shear  
(polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Fluoropolymers, properties  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(polyimide-; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT Polymer morphology  
(surface; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT 588709-05-1  
RL: NUU (Other use, unclassified); USES (Uses)  
(azo dye guest; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT 40817-08-1, 4-Pentyl-4'-cyanobiphenyl  
RL: NUU (Other use, unclassified); USES (Uses)  
(nematic liquid-crystalline host; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT 143969-59-9P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT 129219-40-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

IT 143969-64-6  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(thermal imidized; polyimide orientation layers prepared from lyotropic aromatic poly(amic Et ester)s under shear)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L25 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:258152 CAPLUS

DN 138:278529

ED Entered STN: 03 Apr 2003

TI Liquid crystal composition containing dichroic azo dye and liquid crystal display using it

IN Okamura, Hisashi; Kato, Takashi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09K019-60

ICS G02F001-13; G02F001-137

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003096461	A	20030403	JP 2001-291082	20010925
PRAI	JP 2001-291082		20010925		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003096461	ICM	C09K019-60
	ICS	G02F001-13; G02F001-137
	IPCI	C09K0019-60 [ICM,7]; G02F0001-13 [ICS,7]; G02F0001-137 [ICS,7]
	IPCR	G02F0001-137 [I,A]; C09K0019-60 [I,C*]; C09K0019-60 [I,A]; G02F0001-13 [I,C*]; G02F0001-13 [I,A]

OS MARPAT 138:278529

AB The composition contains a dichroic azo dye represented by AQ2qL2m1Q1L1m2Ar1(N:NAr2)nB (A = alkyl, cycloalkyl, alkoxy, alkoxycarbonyl, acyloxy; B = H, alkyl, cycloalkyl, amino, acylamino, alkylsulfonylamino, arylsulfonylamino, OH, alkoxy, acyloxy, alkoxycarbonyl; Q1, Q2 = divalent aromatic ring group, cyclohexanedyl; L1, L2 = divalent connecting group; Ar1, Ar2 = divalent aromatic ring group; m1, m2 = 0, 1; n = 1-3; q = 3-10). The composition has high dichroic ratio and order parameters. The display has a liquid-crystal phase containing the composition

The composition is especially useful for guest-host liquid crystal displays, and high-contrast images are formed.

ST liq crystal compn dichroic azo dye contrast display; order

parameter dichroic ratio azo dye liq crystal display

IT Dyes  
(dichroic; liquid crystal composition containing dichroic azo dye for high dichroic ratio and order parameters for display providing high-contrast images)

IT Azo dyes  
Liquid crystal displays  
(liquid crystal composition containing dichroic azo dye for high dichroic ratio and order parameters for display providing high-contrast images)

IT 503322-71-2 503322-72-3 503322-73-4 503431-62-7  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(liquid crystal composition containing dichroic azo dye for high dichroic ratio and order parameters for display providing high-contrast images)

L25 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:695885 CAPLUS

DN 137:218123

ED Entered STN: 13 Sep 2002

TI Preparation and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters

IN Murschall, Ursula; Kern, Ulrich; Crass, Guenther

PA Mitsubishi Polyester Film G.m.b.H., Germany

SO PCT Int. Appl., 36 pp.  
CODEN: PIXXD2

DT Patent

LA German

IC ICM B32B027-36  
ICS C08J005-18

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002070255	A1	20020912	WO 2002-EP1823	20020221
	W: JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10110432	A1	20020919	DE 2001-10110432	20010305
PRAI	DE 2001-10110432	A	20010305		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002070255	ICM	B32B027-36
	ICS	C08J005-18
	IPCI	B32B0027-36 [ICM,7]; C08J0005-18 [ICS,7]
	IPCR	B32B0027-36 [I,C*]; B32B0027-36 [I,A]; C08G0063-00 [N,C*]; C08G0063-185 [N,A]; C08G0063-672 [N,A]; C08J0005-18 [I,C*]; C08J0005-18 [I,A]
DE 10110432	ECLA	B32B027/36; C08J005/18+L67/02
	IPCI	B32B0027-20 [ICM,7]; B32B0027-36 [ICS,7]; C08J0005-18 [ICS,7]; C08K0007-16 [ICS,7]; C08K0007-00 [ICS,7,C*]; B29D0007-01 [ICS,7]; B29D0007-00 [ICS,7,C*]
	IPCR	B32B0027-36 [I,C*]; B32B0027-36 [I,A]; C08G0063-00 [N,C*]; C08G0063-185 [N,A]; C08G0063-672 [N,A]; C08J0005-18 [I,C*]; C08J0005-18 [I,A]
	ECLA	B32B027/36; C08J005/18+L67/02

AB The 30-1000- $\mu$ m-thick title film with good optical properties, a high inherent UV stability, and a degree of crystallization <3%, consists preferably of  
a base layer B and two surface layers A and C and contains as main component 50-99 weight% crystallizable bibenzene modified polyester such as bibenzene modified poly(ethylene terephthalate) (PETBB), bibenzene modified poly(ethylene naphthalate) (PENBB), and/or bibenzene modified

poly(butylene terephthalate) (PBTBB), whereby its bibenzoic content is 1-50 weight%, and  $\geq 1$  pigment (0.2-40 weight%) and is suitable for manufacture of laminated films or molded plastics. As colorants inorg. white or black pigments, (in)organic colored pigments or their mixts. may be used. The title film which optionally can be functionally coated on one or both sides, sealed, and/or corona-treated has haze  $>20\%$ , light transmission  $<85\%$ , and a  $20^\circ$  surface gloss  $>15$ . The film may also contain  $\leq 25\%$  recycled material without any neg. influence on its properties. Thus, a  $150\text{-}\mu\text{m}$ -thick, white, amorphous monolayer film was extruded from PETBB, and 7 weight%  $\text{TiO}_2$ , (added as masterbatch) and coated in a reverse gravure-roll coating process with an aqueous dispersion containing

3.0

weight% SP41 (a hydrophilic polyester), 0.10 weight% colloidal  $\text{SiO}_2$  as antiblocking agent and 0.10 weight%  $(\text{NH}_4)_2\text{CO}_3$  as pH-buffer. The film showed a light transmission of 19%, was thermoplastic and had a very good inherent UV stability.

ST amorphous pigmented laminated UV stable thermoplastic film prepn;  
polyethylene terephthalate bibenzene modified laminated white film prepn

IT Pigments, nonbiological

(azo; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Polyesters, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(bibenzene modified; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Carbon black, uses

RL: MOA (Modifier or additive use); USES (Uses)

(black pigment; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Pigments, nonbiological

(black; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Spinel-group minerals

RL: MOA (Modifier or additive use); USES (Uses)

(pigments; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Glycols, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(polymers with terephthalic acid and/or naphthalene dicarboxylic acid; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Coloring materials

Extrusion of plastics and rubbers

Fluorescent brighteners

Laminated plastic films

Recycling of plastics and rubbers

(prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Molded plastics, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Plastic films

(thermo-; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT Pigments, nonbiological

(white; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 402846-63-3, Bibenzoic acid-ethylene glycol-terephthalic acid

copolymer 402846-64-4, Bibenzoic acid-terephthalic

acid-1,4-butanediol copolymer 446822-02-2, Bibenzoic acid-ethylene glycol-2,6-naphthalenedicarboxylic acid copolymer

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(film; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 100-21-0D, Terephthalic acid, polymers with alkylene diols and optionally naphthalene dicarboxylic acid 28604-87-7D, Naphthalene dicarboxylic acid, polymers with alkylene diols and optionally terephthalic acid  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in surface layers; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 13463-67-7, Titanium oxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (pigment, optionally coated with inorg. (hydr)oxides, or spinel-group minerals; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 1313-99-1D, Nickel oxide, nonstoichiometric 1344-28-1, Aluminum oxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (pigments, spinel-group minerals; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 11104-61-3, Cobalt oxide  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (pigments, spinel-group minerals; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 1332-37-2, Iron oxide, uses 1344-70-3, Copper oxide 11118-57-3, Chromium oxide  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (pigments; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 9017-34-9, Ethylene glycol-isophthalic acid-terephthalic copolymer, SRU 24938-04-3, Ethylene isophthalate-ethylene terephthalate copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (sealable top coat; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 25822-53-1, SP41  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (surface layer, in aqueous dispersion; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

IT 7727-43-7, Barium sulfate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (white pigment;; prepn.and use of an amorphous, pigmented, inherently UV stabilized film based on bibenzene modified polyesters)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L25 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:695883 CAPLUS

DN 137:218122

ED Entered STN: 13 Sep 2002

TI Preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics

IN Murschall, Ursula; Kern, Ulrich; Crass, Guenther

PA Mitsubishi Polyester Film G.m.b.H., Germany

SO PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM B32B027-18

ICS C08J005-18; C08K005-13; C08K005-35; B29C047-06

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002070253	A1	20020912	WO 2002-EP1824	20020221
	W: JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10110430	A1	20020919	DE 2001-10110430	20010305
PRAI	DE 2001-10110430	A	20010305		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002070253	ICM	B32B027-18
	ICS	C08J005-18; C08K005-13; C08K005-35; B29C047-06
	IPCI	B32B0027-18 [ICM,7]; C08J0005-18 [ICS,7]; C08K0005-13 [ICS,7]; C08K0005-35 [ICS,7]; C08K0005-00 [ICS,7,C*]; B29C0047-06 [ICS,7]
	IPCR	B29C0047-06 [I,C*]; B29C0047-06 [I,A]; B32B0027-36 [I,C*]; B32B0027-36 [I,A]; C08G0063-00 [N,C*]; C08G0063-185 [N,A]; C08G0063-672 [N,A]; C08J0005-18 [I,C*]; C08J0005-18 [I,A]; C08K0003-00 [I,C*]; C08K0003-00 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]
	ECLA	B29C047/06; B32B027/36; C08J005/18+L67/02; C08K003/00P5+L67/02; C08K005/00P4+L67/02
DE 10110430	IPCI	B32B0027-20 [ICM,7]; B32B0027-36 [ICS,7]; C08J0005-18 [ICS,7]; C08K0013-02 [ICS,7]; C08K0013-00 [ICS,7,C*]; C08J0007-18 [ICS,7]; C08J0007-00 [ICS,7,C*]; B29D0007-01 [ICS,7]; B29D0007-00 [ICS,7,C*]
	IPCR	B29C0047-06 [I,C*]; B29C0047-06 [I,A]; B32B0027-36 [I,C*]; B32B0027-36 [I,A]; C08G0063-00 [N,C*]; C08G0063-185 [N,A]; C08G0063-672 [N,A]; C08J0005-18 [I,C*]; C08J0005-18 [I,A]; C08K0003-00 [I,C*]; C08K0003-00 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]
	ECLA	B29C047/06; B32B027/36; C08J005/18+L67/02; C08K003/00P5+L67/02; C08K005/00P4+L67/02

AB The 30-1000- $\mu$ m-thick title film with good optical properties, a high inherent UV stability, and a degree of crystallization <3%, consists preferably of

a base layer B and two surface layers A and C and contains as main component 50-99 weight% of  $\geq 1$  crystallizable bibenzene modified polyester such as bibenzene modified poly(ethylene terephthalate) (PETBB), bibenzene modified poly(ethylene naphthalate) (PENBB), and/or bibenzene modified poly(butylene terephthalate) (PBTBB), whereby its bibenzoic content is 1-50 weight%, and  $\geq 1$  pigment (0.2-40 weight%) and  $\geq 1$  further additive such as UV stabilizers (0.01-5 weight%), hydrolysis stabilizer (0.01-1 weight%), and fireproofing agents (0.5-30 weight%), and is suitable for manufacture of laminated films or molded plastics. As colorants inorg. white or black pigments, (in)organic colored pigments or their mixts. may be used. The title film which optionally can be functionally coated on one or both sides, sealed, and/or corona-treated has haze >20%, light transmission <85%, and a 20° surface gloss >15. The film may also contain  $\leq 30\%$  recycled material without any neg. influence on its properties. Thus, a 150- $\mu$ m-thick, white, amorphous monolayer film was extruded from PETBB, 0.4 weight% TiO<sub>2</sub>, and 0.6 weight% of the UV-stabilizer Tinuvin 1577 (both added as masterbatch) and coated in a reverse gravure-roll coating process with an aqueous dispersion containing 3.0 weight%



(a hydrophilic polyester), 0.10 weight% colloidal SiO<sub>2</sub> as antiblocking agent and 0.10 weight% (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> as pH-buffer. The film showed a light transmission of 55% and a very good UV stability.

ST amorphous pigmented laminated UV stable thermoplastic film prep; polyethylene terephthalate bibenzene modified fireproof laminated film prep; bibenzene modified polyester fireproof pigmented laminated film

IT Pigments, nonbiological  
(azo; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Polyesters, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(bibenzene modified; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(black pigment; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Pigments, nonbiological  
(black; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Organic compounds, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(phosphorus-containing, fireproofing agent; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Spinel-group minerals  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigments; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Glycols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polymers with terephthalic acid and/or naphthalene dicarboxylic acid; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Coloring materials  
Extrusion of plastics and rubbers  
Fireproofing agents  
Fluorescent brighteners  
Laminated plastic films  
Recycling of plastics and rubbers  
UV stabilizers  
(preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Molded plastics, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Plastic films  
(thermo-; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT Pigments, nonbiological  
(white; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 95-14-7D, 1H-Benzotriazole, 2-Hydroxy compds. 290-87-9, 1,3,5-Triazine 37204-63-0, Benzoxazinone 147315-50-2, Tinuvin 1577  
RL: MOA (Modifier or additive use); USES (Uses)  
(UV stabilizer; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 402846-63-3, Bibenzoic acid-ethylene glycol-terephthalic acid copolymer 402846-64-4, Bibenzoic acid-terephthalic acid-1,4-butanediol copolymer 446822-02-2, Bibenzoic acid-ethylene glycol-2,6-naphthalenedicarboxylic acid copolymer  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

engineered material use); USES (Uses)  
(film; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 42595-45-9  
RL: MOA (Modifier or additive use); USES (Uses)  
(fireproofing agent; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 6303-21-5D, Phosphinic acid, carboxy compds. or its anhydrides  
RL: MOA (Modifier or additive use); USES (Uses)  
(fireproofing agents; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 13598-36-2D, Phosphonic acid, alkane derivs., esters  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fireproofing agents; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 6683-19-8, Pentaerythritol-tetrakis-[3-(3,5-di-tert-butyl-4-hydroxy-phenyl)-propionate]  
RL: MOA (Modifier or additive use); USES (Uses)  
(hydrolysis stabilizer; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 100-21-0D, Terephthalic acid, polymers with alkylene diols and optionally naphthalene dicarboxylic acid 28604-87-7D, Naphthalene dicarboxylic acid, polymers with alkylene diols and optionally terephthalic acid  
RL: TEM (Technical or engineered material use); USES (Uses)  
(in surface layers; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 13463-67-7, Titanium oxide, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment, optionally coated with inorg. (hydr)oxides, or spinel-group minerals; in preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 1345-16-0, Pigment blue 28  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 1313-99-1D, Nickel oxide (NiO), nonstoichiometric 1344-28-1, Aluminum oxide, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigments, spinel-group minerals; in preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 11104-61-3, Cobalt oxide  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigments, spinel-group minerals; in preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 1332-37-2, Iron oxide, uses 1344-70-3, Copper oxide 11118-57-3, Chromium oxide  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigments; in preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 9017-34-9, Ethylene glycol-isophthalic acid-terephthalic copolymer, SRU 24938-04-3, Ethylene isophthalate-ethylene terephthalate copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(sealable top coat; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 25822-53-1, SP41  
RL: TEM (Technical or engineered material use); USES (Uses)  
(surface layer, in aqueous dispersion; preparation and use of an amorphous, pigmented, functionalized film based on bibenzene modified thermoplastics)

IT 7727-43-7, Barium sulfate  
RL: MOA (Modifier or additive use); USES (Uses)  
(white pigment;; preparation and use of an amorphous, pigmented,

functionalized film based on bibenzene modified thermoplastics)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Horn, M; US 5447783 A 1995 CAPLUS
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L25 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:87863 CAPLUS

DN 136:325930

ED Entered STN: 01 Feb 2002

TI Synthesis and properties of liquid-crystalline semi-rigid polyesters based on isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole

AU Sato, Moriyuki; Mizoi, Miyuki; Uemoto, Yuko

CS Department of Material Science, Faculty of Science and Engineering, Shimane University, Matsue, 690-8504, Japan

SO Macromolecular Chemistry and Physics (2001), 202(18), 3634-3641  
CODEN: MCHPES; ISSN: 1022-1352

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 75

AB Semi-rigid polyesters having nitro- or methoxyazobenzene unit in the side chain and calamitic mesogen (biphenyl or 2,5-diphenyl-1,3,4-thiadiazole unit) in the main chain were prepared by melt polycondensation of di-Et isophthalates composed of the azobenzene units with three dioxydiundecanol derivs. of the mesogenic units and their thermotropic liquid crystalline (LC) and optical properties were evaluated. The assigned structures of polymers were characterized by FTIR and <sup>13</sup>C NMR spectroscopy and elemental analyses. Differential scanning calorimetry (DSC) measurements, optical texture observation, powder X-ray analyses and miscibility tests indicated that most of the polyesters form thermotropic LC (smectic B, C, and E) phases and the polymer having the nitroazobenzene in the side chain and the 2,5-diphenyl-1,3,4-thiadiazole in the main chain forms the most stable LC phase. Absorption spectra of the polyesters in solns. and in films showed absorption maxima based on the azobenzene or the 2,5-diphenyl-1,3,4-thiadiazole unit, whereas their emission spectra were not observable.

ST azobenzene phthalate thiadiazole based diol liq cryst polyester synthesis

IT Polyethers, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyester-; synthesis and properties of liquid-crystalline semi-rigid polyesters based on isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT Liquid crystals, polymeric

(polyesters; synthesis and properties of liquid-crystalline semi-rigid polyesters based on isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT Polyesters, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyether-; synthesis and properties of liquid-crystalline semi-rigid polyesters based on isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT Polymer morphology

(synthesis and properties of liquid-crystalline semi-rigid polyesters based

on

isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT 1611-56-9, 11-Bromoundecanol 1711-05-3, m-Methoxybenzoyl chloride

5785-06-8, m-Methoxybenzoyl hydrazide 39630-68-7 125769-27-9

129121-84-2 132458-37-8 194993-70-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer synthesis; synthesis and properties of liquid-crystalline  
semi-rigid  
polyesters based on isophthalates of nitro- or methoxyazobenzene and  
dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT 17453-02-0P 155877-54-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer synthesis; synthesis and properties of liquid-crystalline  
semi-rigid  
polyesters based on isophthalates of nitro- or methoxyazobenzene and  
dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT 412961-25-2P 412961-34-3P 412961-41-2P 412961-46-7P 412961-54-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer; synthesis and properties of liquid-crystalline semi-rigid  
polyesters  
based on isophthalates of nitro- or methoxyazobenzene and  
dioxydiundecanols of biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

IT 412961-56-9P 412961-59-2P 412961-61-6P 412961-63-8P  
412961-65-0P 412961-66-1P 412961-68-3P 412961-70-7P  
412961-72-9P 412961-73-0P 412961-74-1P 412961-76-3P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and properties of liquid-crystalline semi-rigid polyesters based  
on  
isophthalates of nitro- or methoxyazobenzene and dioxydiundecanols of  
biphenyl or 2,5-diphenyl-1,3,4-thiadiazole)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
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(5) Eich, M; J Opt Soc Am 1990, VB7, P1428  
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(13) Sato, M; Liq Cryst 2001, V28, P1211 CAPLUS  
(14) Sato, M; Macromol Chem Phys 1995, V196, P2955 CAPLUS  
(15) Sato, M; Macromol Chem Phys 1996, V197, P1983 CAPLUS  
(16) Sato, M; Macromol Rapid Commun 1994, V15, P21 CAPLUS  
(17) Sato, M; Macromol Rapid Commun 1997, V18, P273 CAPLUS  
(18) Sato, M; Macromol Rapid Commun 2000, V21, P1220 CAPLUS  
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L25 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:785401 CAPLUS  
DN 132:108399  
ED Entered STN: 12 Dec 1999  
TI Synthesis and characterization of novel thermotropic liquid crystalline  
polyesters bearing nonlinear optical azobenzene side group  
AU Zhang, Huiqi; Zhang, Ying; Gan, Xiangping; Yin, Hangming; Sun, Jingwu  
CS School of Chemical Engineering and Technology, Tianjin University,  
Tianjin, 300071, Peop. Rep. China  
SO Transactions of Tianjin University (1999), 5(1), 93-97

CODEN: TTUNEB; ISSN: 1006-4982

PB Tianjin University

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

AB A series of novel thermotropic liquid crystalline polyesters bearing nonlinear optical azobenzene side group were synthesized by high temperature solution polycondensation and their structures, thermal stability, phase transition behavior and crystallinity were characterized by IR, elemental anal., TG-DTA, polarizing optical microscopy and x-ray diffraction techniques. The results demonstrate that all the synthesized polyesters exhibit nematic liquid crystalline phases and show relatively high glass transition temps. and good thermal stability.

ST thermotropic liq cryst polyester; thermal stability thermotropic liq cryst polyester; nonlinear optical liq cryst polyester

IT Polyesters, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(liquid-crystalline; synthesis and characterization of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

IT Polymerization

(of terephthaloyldioxy)dibenzoyl chloride with diols in synthesis of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

IT Liquid crystals, polymeric

(polyesters; synthesis and characterization of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

IT Crystallinity

(synthesis and characterization of thermotropic liquid crystalline polyesters containing mesogenic group in main chain)

IT Glass transition temperature

Nonlinear optical materials

Thermal stability

(synthesis and characterization of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

IT Liquid crystals

(transitions, polymeric; synthesis and characterization of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

IT 255843-85-7P 255843-86-8P 255843-87-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(liquid crystalline; synthesis and characterization of thermotropic liquid crystalline polyesters containing nonlinear optical azobenzene side groups)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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AN 1999:710277 CAPLUS  
 DN 132:57402  
 ED Entered STN: 07 Nov 1999  
 TI Synthesis and liquid crystalline properties of T-shaped dimesogenic compounds  
 AU Lee, Jun-Woo; Piao, Xiang Lin; Yun, Yong-Kuk; Jin, Jung-Il; Kang, Yoon-Sok; Zin, Wang-Cheol  
 CS Department of Chemistry and Center for Electro- & Photo-responsive Molecules, Korea University, Seoul, 136-701, S. Korea  
 SO Liquid Crystals (1999), 26(11), 1671-1685  
 CODEN: LICRE6; ISSN: 0267-8292  
 PB Taylor & Francis Ltd.  
 DT Journal  
 LA English  
 CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 25, 69  
 AB Two series of new dimesogenic liquid crystalline compds. were synthesized and their liquid crystal and other thermal properties were studied. These compds. consist of two mesogenic units connected through polymethylene spacer of varying length in the shape of the letter T. The difference between the two series is in the structure of tail groups attached on the pendant azobenzene mesogens; one of which is Bu and the other is Ph. The compds. were characterized for their liquid crystallinity by the DSC, x-ray diffractometry and visual observation of the melts on a hot-stage attached to a polarizing microscope. All these compds. form only the nematic phase enantiotropically.  
 ST ethoxyphenyl butylphenylazophenoxyalkoxyterephthalate  
 biphenylazophenoxyalkoxyterephthalate prepn liq crystal thermal property  
 IT Liquid crystals  
 (nematic; preparation and properties of bis(ethoxyphenyl)  
 {[(butylphenylazo)phenoxy]alkoxy}terephthalates and bis(ethoxyphenyl)  
 {[(biphenylazo)phenoxy]alkoxy}terephthalates)  
 IT Fusion enthalpy  
 Fusion entropy  
 Phase transition enthalpy  
 Phase transition entropy  
 (of bis(ethoxyphenyl) {[(butylphenylazo)phenoxy]alkoxy}terephthalate  
 and bis(ethoxyphenyl) {[(biphenylazo)phenoxy]alkoxy}terephthalate liquid  
 crystals)  
 IT 203245-58-3P 252987-66-9P 252987-67-0P 252987-68-1P 252987-70-5P  
 252987-73-8P 252987-76-1P 252987-79-4P  
 252987-82-9P 252987-85-2P 252987-88-5P  
 252987-91-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and esterification of)  
 IT 252987-72-7P 252987-75-0P 252987-78-3P  
 252987-81-8P 252987-84-1P 252987-87-4P  
 252987-90-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and hydrolysis of)  
 IT 175171-72-9P 203245-55-0P 252987-55-6P 252987-56-7P 252987-57-8P  
 252987-58-9P 252987-59-0P 252987-60-3P  
 252987-61-4P 252987-62-5P 252987-63-6P  
 252987-64-7P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
 (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (preparation and liquid crystal and thermal properties of)  
 IT 6342-72-9P, Dimethyl 2-hydroxyterephthalate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction with (bromoalkoxy)butylazobenzenes)  
 IT 175171-70-7P 194292-77-8P 220363-70-2P 252987-65-8P 252987-69-2P  
 252987-71-6P 252987-74-9P 252987-77-2P 252987-80-7P 252987-83-0P

252987-86-3P 252987-89-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(preparation and reaction with di-Me hydroxyterephthalate)

IT 195724-49-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(preparation and reactions with dibromoalkanes)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L25 ANSWER 14 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:472067 CAPLUS

DN 131:151662

ED Entered STN: 02 Aug 1999

TI Electrophotographic photoreceptor

IN Nagata, Miyako; Miki, Nobumichi; Aino, Hideyuki

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-05

ICS G03G005-06; G03G005-147

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 25, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11202507	A	19990730	JP 1998-5450	19980114
PRAI	JP 1998-5450		19980114		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11202507	ICM	G03G005-05
	ICS	G03G005-06; G03G005-147
	IPCI	G03G0005-05 [ICM,6]; G03G0005-06 [ICS,6]; G03G0005-147 [ICS,6]

OS MARPAT 131:151662

GI For diagram(s), see printed CA Issue.

AB The title photoreceptor, comprising a conductive support coated with a photosensitive layer, contains a polymer having a structural unit I [X = CR3R4 (R3, R4 = H, CF3, C1-6 alkyl, C6-12 aryl), (substituted) C5-11 1,1-cycloalkylene, C2-10  $\alpha,\omega$ -alkylene, single bond, O, S, SO, SO2; R1, R2 = H, halo, (substituted) alkyl, aryl, alkylene; a, b = 0-4] in the surface layer and an azo compound II [CP1, CP2 = III, IV, V {R1 = (substituted) saturated or unsatd. alkyl, (substituted) aryl; Q = divalent (substituted) aromatic hydrocarbon, divalent (substituted) heterocyclic group; R2, R3 = H, (substituted) alkyl, (substituted) aryl, (substituted) heterocyclic group, R2 and R3 may link each other to form a ring; Y = divalent group which condenses with the benzene ring to form an aromatic hydrocarbon or heterocycle}] or VI [Y = H, halo, alkyl, alkoxy; Z = CONHAr, CONHN:CHAr (Ar = substituted Ph)] as a charge-generating substance in the photosensitive layer. The surface layer shows improved anti-solvent cracking properties and high mech. strength and the photoreceptor exhibits high photosensitivity and durability in repeated use even in direct charging process and low memory.

ST polyarylate surface layer electrophotog photoreceptor; azo compd charge generate electrophotog photoreceptor

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)  
(aromatic; electrophotog. photoreceptor having polyarylate surface layer and photosensitive layer containing aromatic azo compound as charge-generating substance)

IT Electrophotographic photoconductors (photoreceptors)  
(electrophotog. photoreceptor having polyarylate surface layer and photosensitive layer containing aromatic azo compound as charge-generating substance)

IT 71396-32-2

RL: DEV (Device component use); USES (Uses)  
(9electrophotog. photoreceptor having polyarylate surface layer and photosensitive layer containing aromatic azo compound as charge-generating substance)

IT 67016-92-6 70621-09-9 84982-68-3 89593-58-8 95993-65-0  
96230-47-6 118175-65-8 135667-45-7 153344-14-0 189158-25-6  
189158-32-5 189172-23-4 201540-23-0 201540-24-1  
201540-25-2 201540-26-3 201540-27-4 203201-22-3 203201-23-4  
236123-85-6 236123-86-7

RL: DEV (Device component use); USES (Uses)  
(electrophotog. photoreceptor having polyarylate surface layer and photosensitive layer containing aromatic azo compound as charge-generating substance)

L25 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:427054 CAPLUS

DN 131:122919

ED Entered STN: 12 Jul 1999

TI Electrophotographic photoconductor, detachable process cartridge, and electrophotographic apparatus

IN Ainoya, Hideyuki; Miki, Nobumichi; Yamazaki, Itaru



PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03G005-147  
 ICS G03G005-06  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

FAN.CNT 1

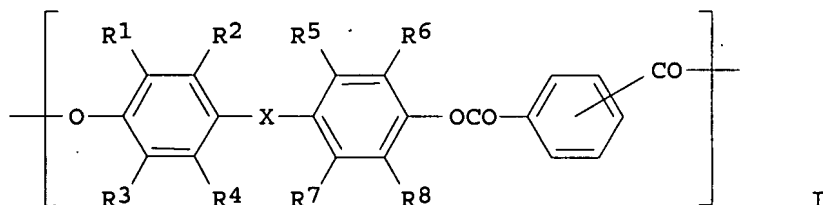
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11184135	A	19990709	JP 1997-357640	19971225
PRAI	JP 1997-357640		19971225		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11184135	ICM	G03G005-147
	ICS	G03G005-06
	IPCI	G03G0005-147 [ICM,6]; G03G0005-06 [ICS,6]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G03G0005-147 [I,A]; G03G0005-147 [I,C*]

OS MARPAT 131:122919

GI



AB The photoconductor has the surface layer containing polyester repeating unit I [R1-R8 = H, halogen, (substituted) alkyl, alkenyl, aryl; X = CR9R10, (substituted) C2-10  $\alpha,\omega$ -alkylene, C5-11 1,1-cycloalkylene, direct bond, O, S, SO, SO2; R9, R10 = H, CF3, C1-6 alkyl, C6-12 aryl] and azo compds. (specific structures are defined in the claim). The photoconductor shows improved resistance to abrasion and solvent crack and decreased photo memory and transfer memory. The detachable process cartridge supports the photoconductor, a means of charging, a means of developing, and/or a means of cleaning as one piece and the electrophotog. apparatus involves the above means.

ST electrophotog photoconductor azo compd; solvent crack resistance electrophotog photoconductor; abrasion resistance electrophotog photoconductor

IT Polyesters, properties  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (aromatic; electrophotog. photoconductor with surface polyester layer containing azo compds. with solvent crack and abrasion resistance)

IT Electrophotographic apparatus  
 (electrophotog. apparatus having detachable cartridge and electrophotog. photoconductor with surface polyester layer containing azo compds.)

IT Abrasion-resistant materials  
 Electrophotographic photoconductors (photoreceptors)  
 Solvent-resistant materials

(electrophotog. photoconductor with surface polyester layer containing  
azo compds. with solvent crack and abrasion resistance)

IT 67016-92-6 71396-32-2 82829-36-5 84809-01-8 96230-47-6  
108512-50-1 114608-51-4 118175-65-8 135667-45-7 145465-36-7  
145465-38-9 151798-26-4 153344-14-0 189158-25-6 189158-32-5  
201540-23-0 201540-24-1 201540-25-2 201540-26-3  
201540-27-4 203201-22-3 232949-72-3 232949-73-4 232951-88-1

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. photoconductor with surface polyester layer containing  
azo compds. with solvent crack and abrasion resistance)

L25 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:427053 CAPLUS

DN 131:122918

ED Entered STN: 12 Jul 1999

TI Electrophotographic photoconductor containing bisazo pigment and perylene  
pigment or phthalocyanine, detachable process cartridge, and  
electrophotographic apparatus

IN Miki, Nobumichi; Aino, Hideyuki; Yamazaki, Itaru

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-147

ICS C08G064-04; G03G005-06; C08L067-03

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

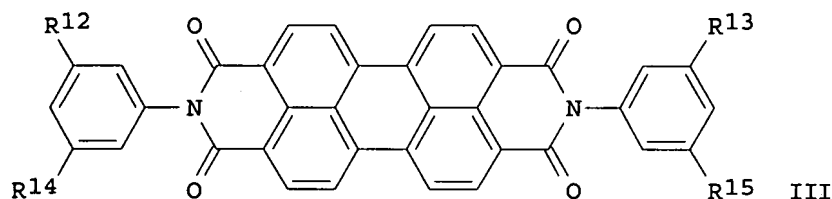
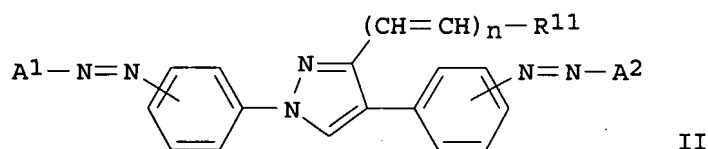
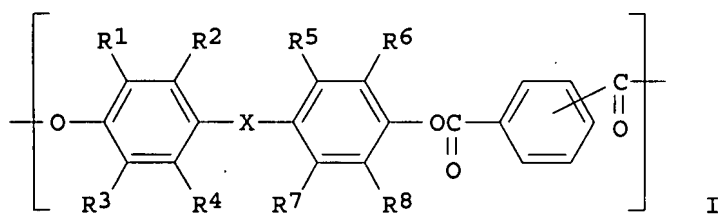
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11184133	A	19990709	JP 1997-354380	19971224
	JP 3897429	B2	20070322		
PRAI	JP 1997-354380		19971224		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11184133	ICM	G03G005-147
	ICS	C08G064-04; G03G005-06; C08L067-03
	IPCI	G03G0005-06 [I,A]; C08G0064-04 [I,A]; C08G0064-00 [I,C*]; G03G0005-05 [I,A]; C08L0067-03 [N,A]; C08L0067-00 [N,C*]
	IPCR	C08G0064-00 [I,C*]; C08G0064-04 [I,A]; C08L0067-00 [N,C*]; C08L0067-03 [N,A]; G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G03G0005-147 [I,A]; G03G0005-147 [I,C*]

OS MARPAT 131:122918

GI



- AB The photoconductor has the surface layer containing polyester repeating unit I [R1-R8 = H, halogen, (substituted) alkyl, alkenyl, aryl; X = CR9R10, (substituted) C2-10  $\alpha,\omega$ -alkylene, C5-11 1,1-cycloalkylene, direct bond, O, S, SO, SO2; R9, R10 = H, CF3, C1-6 alkyl, C6-12 aryl], bisazo pigment II [A1, A2 = coupler residue; R11 = H, (substituted) alkyl, aryl, heterocyclic group; n = 0, 1], and perylene pigment III [R12-R15 = H, (substituted) alkyl, alkoxy, aryl]. Alternatively, the pigment in the surface layer is oxytitanium phthalocyanine having peaks at specified Bragg angles in x-ray diffraction. The photoconductor shows improved resistance to abrasion and solvent crack and decreased photo memory and transfer memory. The detachable process cartridge supports the photoconductor, a means of charging, a means of developing, and/or a means of cleaning as one piece and the electrophotog. apparatus involves the above means.
- ST electrophotog photoconductor bisazo perylene pigment; oxytitanium phthalocyanine pigment electrophotog photoconductor; solvent crack resistance electrophotog photoconductor; abrasion resistance electrophotog photoconductor
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(aromatic; electrophotog. photoconductor using oxytitanium phthalocyanine or mixture of bisazo pigment and perylene pigment in polyester layer)
- IT Pigments, nonbiological  
(azo; electrophotog. photoconductor using oxytitanium phthalocyanine or mixture of bisazo pigment and perylene pigment)
- IT Electrophotographic photoconductors (photoreceptors)  
(electrophotog. photoconductor using oxytitanium phthalocyanine or mixture of bisazo pigment and perylene pigment)
- IT Electrophotographic apparatus  
(electrophotog. photoconductor using oxytitanium phthalocyanine or mixture of bisazo pigment and perylene pigment in detachable cartridge in electrophotog. apparatus)
- IT Abrasion-resistant materials  
Solvent-resistant materials  
(electrophotog. photoconductor using oxytitanium phthalocyanine or mixture of bisazo pigment and perylene pigment in polyester layer)
- IT 4948-15-6 26201-32-1, Titanyl phthalocyanine 67016-92-6 71396-32-2  
96230-47-6 118175-65-8 135667-45-7 150460-47-2 153344-14-0

167893-71-2 172211-45-9 189158-25-6 189158-32-5  
201540-23-0 201540-24-1 201540-25-2 201540-26-3  
201540-27-4 203201-22-3 203201-23-4

RL: TEM (Technical or engineered material use); USES (Uses)  
(electrophotog. photoconductor using oxytitanium phthalocyanine or  
mixture of bisazo pigment and perylene pigment in polyester layer)

L25 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:389350 CAPLUS

DN 131:214654

ED Entered STN: 24 Jun 1999

TI Phase transfer catalysis in polycondensation processes (XIX): thermal  
behavior of some polyesters containing oxetane rings in the main chain  
with potential NLO properties

AU Foia, Cecilia; Toader, Violeta; Hurduc, Natalia; Hurduc, Nicolae

CS Department of Physical Chemistry, Al.I. Cuza University, Iassy, 6600, Rom.

SO Iranian Polymer Journal (1999), 8(1), 9-15

CODEN: IPJOFF; ISSN: 1026-1265

PB Iran Polymer Institute

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 73

AB Polyesters were prepared by phase transfer polycondensation of potassium  
isophthalate, various dyes, and 3,3-bis(chloromethyl)oxetane using  
tetrabutylammonium hydrogen sulfate as phase transfer catalyst. The dyes  
are: Malachite Green carbinol, 2,4-Dihydroxyazobenzene, Evans Blue, and  
Fluorescein. The structure and composition of the polyester were characterized  
by <sup>1</sup>H NMR spectroscopy and thermogravimetric anal. The thermal behavior  
of the polyesters was compared to that of a phys. mixture (homopolymer and  
dye). The polyesters are thermally stable, the decomposition temperature is  
about

220° while the pure dye degradation process starts at about  
100°, i.e., the dye causes a decrease in thermal stability of phys.  
mixts. but does not affect the polyesters. The insertion of the dye in  
the chemical structure of the polyester results in a non-linear optical (NLO)  
moiety by opening of oxetane rings in the presence of diamines. The  
polyester are of interest for use as precursors for colored NLO networks.

ST potassium isophthalate chloromethyloxetane dye phase transfer polymn;  
polyester oxetane dye stability nonlinear optical property

IT Polyesters, preparation

Polyesters, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(cardo, amine and azo-group containing; preparation of thermally  
stable dye- and oxetane-containing polyesters by phase transfer  
polycondensation as NLO precursors)

IT Cardo polymers

Cardo polymers

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(polyesters, amine and azo-group containing; preparation of thermally  
stable dye- and oxetane-containing polyesters by phase transfer  
polycondensation as NLO precursors)

IT Nonlinear optical materials

Polymerization

Thermal stability

(preparation of thermally stable dye- and oxetane-containing polyesters by

phase

transfer polycondensation as NLO precursors)

IT 78-71-7, 3,3-Bis(chloromethyl)oxetane 314-13-6, Evans Blue 510-13-4,

Malachite Green carbinol 2051-85-6, 2,4-Dihydroxyazobenzene 2321-07-5,

Fluorescein 15898-14-3, Potassium isophthalate

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)

(monomer and mixture component; preparation of thermally stable dye- and  
oxetane-containing polyesters by phase transfer polycondensation as NLO  
precursors)

IT 32503-27-8, Tetrabutylammonium hydrogen sulfate  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of thermally stable dye- and oxetane-containing polyesters by  
phase

transfer polycondensation as NLO precursors)

IT 143894-63-7P, 3,3-Bis(chloromethyl)oxetane-potassium isophthalate  
copolymer, SRU 143930-93-2P, 3,3-Bis(chloromethyl)oxetane-potassium  
isophthalate copolymer 242798-67-0P, 3,3-Bis(chloromethyl)oxetane-  
potassium isophthalate-Sudan Yellow AR copolymer 242798-68-1P,  
3,3-Bis(chloromethyl)oxetane-Evans blue-potassium isophthalate copolymer  
242798-70-5P 243137-67-9P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of thermally stable dye- and oxetane-containing polyesters by  
phase

transfer polycondensation as NLO precursors)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Bulacovschi, V; J Serb Chem Soc 1998, V63, P445 CAPLUS
- (2) Coats, A; Nature 1964, V201, P68 CAPLUS
- (3) Daoudi, A; J Macromol Sci-Pure Appl Chem in press 1997, VA34, P11
- (4) Freeman, E; J Phys Chem 1958, V62, P394 CAPLUS
- (5) Hurduc, N; Eur Polym J 1992, V28, P791 CAPLUS
- (6) Hurduc, N; Eur Polym J 1993, V29, P1333 CAPLUS
- (7) Hurduc, N; Eur Polym J 1997, V33, P187 CAPLUS
- (8) Hurduc, N; Materiale Plastice 1996, V33, P143 CAPLUS
- (9) Hurduc, N; Polym J 1996, V28, P550 CAPLUS
- (10) Reich, L; Macromol Chem 1963, V66, P102 CAPLUS
- (11) Ying-Ling, L; J Polym Sci Part A: Polym Chem 1994, V32, P3201

L25 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:189148 CAPLUS

DN 130:238781

ED Entered STN: 23 Mar 1999

TI Polyester toner composition for electrophotographic imaging systems

IN Borzo, Marie; Chiang, Kophu; Choe, Eui-Won; Mikkilineni, Rao D.; Yoon,  
Hyun-Nam

PA Hoechst Celanese Corporation, USA

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09B069-10

ICS G03G009-087; C07C069-82

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
Sensitizers)

Section cross-reference(s): 35, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9911720	A1	19990311	WO 1998-US15454	19980728
	W: CA, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6001980	A	19991214	US 1997-923394	19970903
	EP 1009777	A1	20000621	EP 1998-937124	19980728
	R: DE, FR, GB				
	JP 2001514320	T	20010911	JP 2000-508739	19980728
	US 6090516	A	20000718	US 1999-411761	19991004
	US 6090973	A	20000718	US 1999-411948	19991004
PRAI	US 1997-923394	A	19970903		
	WO 1998-US15454	W	19980728		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9911720	ICM	C09B069-10

	ICS	G03G009-087; C07C069-82
	IPCI	C09B0069-10 [ICM,6]; C09B0069-00 [ICM,6,C*]; G03G0009-087 [ICS,6]; C07C0069-82 [ICS,6]; C07C0069-00 [ICS,6,C*]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
	ECLA	C07C069/82; C09B069/10; G03G009/087D4; G03G009/087H3; G03G009/09D
US 6001980	IPCI	C09B0043-26 [ICM,6]; C09B0043-136 [ICS,6]; C09B0043-00 [ICS,6,C*]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
	NCL	534/682.000; 534/591.000; 534/595.000; 534/683.000; 534/686.000; 534/733.000; 534/766.000
	ECLA	C07C069/82; C09B069/10; G03G009/087D4; G03G009/087H3; G03G009/09D
EP 1009777	IPCI	C09B0069-10 [ICM,6]; C09B0069-00 [ICM,6,C*]; G03G0009-087 [ICS,6]; C07C0069-82 [ICS,6]; C07C0069-00 [ICS,6,C*]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
JP 2001514320	IPCI	C09B0069-10 [ICM,7]; C09B0069-10 [ICS,7]; C09B0069-00 [ICS,7,C*]; C07C0069-82 [ICS,7]; C07C0069-00 [ICS,7,C*]; G03G0009-087 [ICS,7]; G03G0009-09 [ICS,7]; G03G0009-12 [ICS,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
US 6090516	IPCI	G03G0009-09 [ICM,7]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
	NCL	430/108.220; 430/108.400; 430/109.400; 430/111.400
	ECLA	G03G009/087D4; G03G009/087H3; G03G009/09D
US 6090973	IPCI	C07C0069-82 [ICM,7]; C07C0069-00 [ICM,7,C*]
	IPCR	C07C0069-00 [I,C*]; C07C0069-82 [I,A]; C09B0069-00 [I,C*]; C09B0069-10 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0009-09 [I,C*]; G03G0009-09 [I,A]; G03G0009-12 [I,C*]; G03G0009-12 [I,A]
	NCL	560/064.000
OS	MARPAT	130:238781
AB	A toner composition for application in electrophotog. imaging systems comprises a free-flowing polyester dye powder which has superior stability and transparency, and one or more optional components such as a charge-control agent or a surfactant. Thus, reaction of 0.1 mol 2,6-diamino-6'-butoxy-3,3'-azodipyridine with 0.2 mol sebacoyl chloride in the presence of 0.2 mol MeONa gave a yellow azo diamide di-Me ester, which could be incorporated in a polyester to form a toner.	
ST	colored polyester electrophotog toner; azo dye monomer incorporation polyester	
IT	Electrophotographic toners (preparation of colored polyester electrophotog. toner composition)	
IT	Polyesters, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (preparation of colored polyester electrophotog. toner composition)	
IT	221358-47-0P	

RL: IMF (Industrial manufacture); PREP (Preparation)  
(black; colored monomer for polyester electrophotog. toner composition)

IT 221358-32-3P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(blue; colored monomer for polyester electrophotog. toner composition)

IT 221358-46-9P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(colored monomer for polyester electrophotog. toner composition)

IT 221358-44-7P 221358-45-8P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(cyan; colored monomer for polyester electrophotog. toner composition)

IT 216865-13-3P 221358-34-5P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(magenta; colored monomer for polyester electrophotog. toner composition)

IT 216865-14-4P 221358-41-4P, Bis(3-hydroxy-2-methylpropyl)  
terephthalate-2,9-dimethylquinacridone copolymer 221358-42-5P  
221358-43-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(magenta; preparation of colored polyester electrophotog. toner composition)

IT 74-39-5, 4-[(4-Nitrophenyl)azo]resorcinol 92-62-6,  
3,6-Diaminoacridine 111-19-3, Sebacoyl chloride 581-64-6, Thionine  
617-19-6 632-99-5, Fuchsin 980-26-7, 2,9-Dimethylquinacridone  
6359-04-2, Methyl eosin  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of colored monomer for polyester electrophotog. toner  
composition)

IT 221358-48-1P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of colored polyester electrophotog. toner composition)

IT 206366-96-3P 216865-10-0P, Bis(2-hydroxyhexadecyl) terephthalate  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of colored polyester electrophotog. toner composition)

IT 2163-42-0, 2-Methyl-1,3-propanediol 6920-24-7, 1,2-Hexadecanediol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of colored polyester electrophotog. toner composition)

IT 221358-33-4P 221358-35-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(red; colored monomer for polyester electrophotog. toner composition)

IT 120-61-6, Dimethyl terephthalate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(transesterification of)

IT 221358-30-1P 221358-36-7P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(yellow; colored monomer for polyester electrophotog. toner composition)

IT 221358-37-8P, Bis(3-hydroxy-2-methylpropyl) terephthalate-C.I.  
Pigment Yellow 17 copolymer 221358-38-9P, C.I. Pigment Yellow  
17-dimethyl terephthalate-propylene glycol copolymer 221358-39-0P  
, Bis(2-hydroxyethyl) terephthalate-bis(2-hydroxypropyl)  
terephthalate-C.I. Pigment Yellow 17 copolymer 221358-40-3P,  
Bis(2-hydroxyethyl) terephthalate-bis(3-hydroxy-2-methylpropyl)  
terephthalate-C.I. Pigment Yellow 17 copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(yellow; preparation of colored polyester electrophotog. toner composition)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Asquith, R; JOURNAL OF THE SOCIETY OF DYERS AND COLOURISTS 1977, V93(4),  
P114 CAPLUS
- (2) Du Pont; EP 0153736 A 1985 CAPLUS
- (3) Eastman Kodak Co; WO 9207913 A 1992 CAPLUS
- (4) Hewlett Packard Co; EP 0674235 A 1995 CAPLUS
- (5) Ong Beng, S; US 4778742 A 1988 CAPLUS
- (6) Xerox Corp; GB 1377067 A 1974

L25 ANSWER 19 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:324767 CAPLUS  
 DN 129:21553  
 ED Entered STN: 01 Jun 1998  
 TI Polarizer films with high thermal and hygroscopic stability for  
 liquid-crystal displays  
 IN Teng, Chia-chi; Yoon, Hyun Nam; Mortazavi, Mohammad  
 PA Hoechst Celanese Corp., USA  
 SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM F21V009-14  
 ICS C09K019-00  
 INCL 252585000  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5753145	A	19980519	US 1995-458388	19950602
	JP 11506548	T	19990608	JP 1996-536526	19960520
PRAI	US 1995-458388	A	19950602		
	WO 1996-US7275	W	19960520		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5753145	ICM	F21V009-14
	ICS	C09K019-00
	INCL	252585000
	IPCI	F21V0009-14 [ICM,6]; F21V0009-00 [ICM,6,C*]; C09K0019-00 [ICS,6]
	IPCR	C08J0005-18 [I,C*]; C08J0005-18 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0067-00 [I,C*]; C08L0067-03 [I,A]; C08L0069-00 [I,C*]; C08L0069-00 [I,A]; C08L0071-00 [I,C*]; C08L0071-12 [I,A]; C08L0073-00 [I,C*]; C08L0073-00 [I,A]; C08L0075-00 [I,C*]; C08L0075-04 [I,A]; C08L0077-00 [I,C*]; C08L0077-10 [I,A]; C08L0077-12 [I,A]; C08L0101-00 [I,C*]; C08L0101-12 [I,A]; G02B0005-30 [I,C*]; G02B0005-30 [I,A] 252/585.000; 252/299.010; 252/299.100 G02B005/30P1
JP 11506548	IPCI	G02B0005-30 [ICM,6]; C08J0005-18 [ICS,6]; C08K0005-00 [ICS,6]; C08L0067-03 [ICS,6]; C08L0067-00 [ICS,6,C*]; C08L0069-00 [ICS,6]; C08L0071-12 [ICS,6]; C08L0071-00 [ICS,6,C*]; C08L0073-00 [ICS,6]; C08L0075-04 [ICS,6]; C08L0075-00 [ICS,6,C*]; C08L0077-10 [ICS,6]; C08L0077-12 [ICS,6]; C08L0077-00 [ICS,6,C*]; C08L0101-12 [ICS,6]; C08L0101-00 [ICS,6,C*]
	IPCR	G02B0005-30 [I,A]; G02B0005-30 [I,C*]
AB		This invention provides novel liquid crystal polymers which, when blended with a suitable dye at a suitable high temperature and extruded, yields polarizer films with superior thermal and hygroscopic stability and polarizing efficiency for use in liquid-crystal displays. The invention further provides a process to prepare such polarizer films.
ST		polarizer polymer liq crystal display; polymer liq crystal polarizer display device
IT		Polarizers (containing liquid crystal polymers and dyes for)
IT		Anthraquinone dyes Azo dyes (liquid-crystal displays with polarizer films containing liquid crystal



polymers and)

IT Liquid crystal displays  
(polarizer films containing liquid crystal polymers and dyes for)

IT 155507-58-7, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic  
acid-6-hydroxy-2-naphthoic acid-resorcinol-terephthalic acid copolymer  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)

(liquid-crystal displays with polarizer films containing dyes and)

IT 1341-95-3, Green 1 2475-44-7, Disperse blue 78 2475-45-8, Disperse  
blue 1 2516-05-4, Methylene violet Bernthsen 3266-98-6, Disperse  
violet 12 6054-52-0, Disperse blue 15 6358-49-2, Disperse yellow 8  
6373-16-6, Disperse blue 22 12217-83-3, Disperse orange 26 12222-88-7,  
Disperse blue 90 12222-93-4, Disperse blue 98 12223-24-4, Disperse  
orange 39 12223-98-2, Disperse yellow 87 17418-58-5, Disperse Red 60  
54077-16-6, Disperse Yellow 56 61867-95-6, Disperse yellow 44  
61968-31-8, Disperse blue 151 67338-59-4, Disperse yellow 86  
67584-73-0, Disperse Red 71775-54-7, Disperse violet 9 71775-55-8,  
Disperse yellow 12 86438-37-1, Disperse blue 168 88650-95-7, Disperse  
blue 270 104491-84-1, Disperse Blue 214 107043-92-5, Disperse blue 202  
206137-50-0, Disperse black 17 206137-51-1, Disperse black 19  
206137-52-2, Disperse black 154 206137-53-3, Disperse blue 236  
206137-54-4, Disperse blue 249 206137-55-5, Disperse brown 44  
206137-56-6, Disperse brown 106 206137-57-7, Disperse brown 195  
206137-58-8, Disperse brown 210 206137-59-9, Disperse brown 242  
206137-60-2, Disperse brown 247 206137-61-3, Disperse green 85 206137-  
62-4, Disperse orange 106 206137-63-5, Disperse orange 107  
206137-64-6, Disperse violet 51 206137-65-7, Disperse violet 98  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)

(liquid-crystal displays with polarizer films containing liquid crystal  
polymers and)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; EP 0275077 A1 1988 CAPLUS
- (2) Anon; JP 6228698 1988
- (3) Anon; JP 63195602 1988
- (4) Anon; EP 0323160 A3 1989 CAPLUS
- (5) Anon; EP 0348964 A3 1990
- (6) Anon; Patent Abstracts of Japan 1988, V12(62), PP-670
- (7) Anon; Patent Abstracts of Japan 1988, V2(477), PP-800
- (8) Claussen; US 5340504 1994 CAPLUS
- (9) Eich; US 5024784 1991 CAPLUS
- (10) Misawa; US 5318856 1994 CAPLUS
- (11) Mitsubishi; JP 63195602 A 1988
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- (13) Miura; US 4840640 1989 CAPLUS
- (14) Nakamura; US 4824882 1989 CAPLUS
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- (16) Nishizawa; US 4842781 1989 CAPLUS
- (17) Okada; US 5310509 1994 CAPLUS
- (18) Ringsdorf; US 4631328 1986 CAPLUS
- (19) Tanaka; US 5071906 1991 CAPLUS

L25 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:798713 CAPLUS

DN 128:55685

ED Entered STN: 24 Dec 1997

TI Chiral cholesteric liquid-crystal polymers containing colored monomers and  
their preparation and use

IN Dietz, Erwin; Schoenfeld, Axel

PA Hoechst A.-G., Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C09K019-38  
 ICS C09B069-10; C08G069-44; C08G063-60; C08G069-12; C08G063-18;  
 C08G063-19; C08G063-199; C08G069-26; C08G063-685; C09D017-00;  
 C09B067-20  
 ICA C08G063-181; C08G063-06; C09B003-60; C09B001-00; C09B019-02; C09B047-04;  
 C09B048-00; C09B057-00  
 CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 38, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19620746	A1	19971127	DE 1996-19620746	19960523
	WO 9744408	A1	19971127	WO 1997-EP2411	19970512
	W: BR, CA, CN, CZ, HU, JP, KR, MX, PL, TR				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 902820	A1	19990324	EP 1997-923055	19970512
	EP 902820	B1	20010919		
	R: CH, DE, ES, FR, GB, IT, LI				
	JP 2000511216	T	20000829	JP 1997-541475	19970512
	US 5837160	A	19981117	US 1997-859750	19970521
PRAI	DE 1996-19620746	A	19960523		
	WO 1997-EP2411	W	19970512		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19620746	ICM	C09K019-38
	ICS	C09B069-10; C08G069-44; C08G063-60; C08G069-12; C08G063-18; C08G063-19; C08G063-199; C08G069-26; C08G063-685; C09D017-00; C09B067-20
	ICA	C08G063-181; C08G063-06; C09B003-60; C09B001-00; C09B019-02; C09B047-04; C09B048-00; C09B057-00
	IPCI	C09K0019-38 [ICM,6]; C09B0069-10 [ICS,6]; C09B0069-00 [ICS,6,C*]; C08G0069-44 [ICS,6]; C08G0063-60 [ICS,6]; C08G0069-12 [ICS,6]; C08G0063-18 [ICS,6]; C08G0063-19 [ICS,6]; C08G0063-199 [ICS,6]; C08G0069-26 [ICS,6]; C08G0069-00 [ICS,6,C*]; C08G0063-685 [ICS,6]; C09D0017-00 [ICS,6]; C09B0067-20 [ICS,6]; C09B0067-00 [ICS,6,C*]; C08G0063-181 [ICA,6]; C08G0063-06 [ICA,6]; C08G0063-00 [ICA,6,C*]; C09B0003-60 [ICA,6]; C09B0003-00 [ICA,6,C*]; C09B0001-00 [ICA,6]; C09B0019-02 [ICA,6]; C09B0019-00 [ICA,6,C*]; C09B0047-04 [ICA,6]; C09B0048-00 [ICA,6]; C09B0057-00 [ICA,6]
	IPCR	C08G0083-00 [I,C*]; C08G0083-00 [I,A]; C08L0101-00 [I,C*]; C08L0101-12 [I,A]; C09D0005-29 [I,C*]; C09D0005-29 [I,A]; C09D0017-00 [I,C*]; C09D0017-00 [I,A]; C09K0019-00 [I,C*]; C09K0019-00 [I,A]; C09K0019-38 [I,C*]; C09K0019-38 [I,A]; C09K0019-40 [I,C*]; C09K0019-40 [I,A]
WO 9744408	ECLA	C09K019/00; C09K019/38A2; C09K019/38B; C09K019/40F2
	IPCI	C09K0019-38 [ICM,6]; C09K0019-40 [ICS,6]
	IPCR	C08G0083-00 [I,C*]; C08G0083-00 [I,A]; C08L0101-00 [I,C*]; C08L0101-12 [I,A]; C09D0005-29 [I,C*]; C09D0005-29 [I,A]; C09D0017-00 [I,C*]; C09D0017-00 [I,A]; C09K0019-00 [I,C*]; C09K0019-00 [I,A]; C09K0019-38 [I,C*]; C09K0019-38 [I,A]; C09K0019-40 [I,C*]; C09K0019-40 [I,A]
EP 902820	ECLA	C09K019/00; C09K019/38A2; C09K019/38B; C09K019/40F2
	IPCI	C09K0019-38 [ICM,6]; C09K0019-40 [ICS,6]
	IPCR	C08G0083-00 [I,C*]; C08G0083-00 [I,A]; C08L0101-00 [I,C*]; C08L0101-12 [I,A]; C09D0005-29 [I,C*]; C09D0005-29 [I,A]; C09D0017-00 [I,C*]; C09D0017-00 [I,A]; C09K0019-00 [I,C*]; C09K0019-00 [I,A]; C09K0019-38 [I,C*]; C09K0019-38 [I,A]; C09K0019-40 [I,C*]; C09K0019-40 [I,A]

JP 2000511216 IPCI C08G0083-00 [ICM,7]; C08L0101-12 [ICS,7]; C08L0101-00 [ICS,7,C\*]; C09D0005-29 [ICS,7]; C09D0017-00 [ICS,7]; C09K0019-38 [ICS,7]

IPCR C08G0083-00 [I,C\*]; C08G0083-00 [I,A]; C08L0101-00 [I,C\*]; C08L0101-12 [I,A]; C09D0005-29 [I,C\*]; C09D0005-29 [I,A]; C09D0017-00 [I,C\*]; C09D0017-00 [I,A]; C09K0019-00 [I,C\*]; C09K0019-00 [I,A]; C09K0019-38 [I,C\*]; C09K0019-38 [I,A]; C09K0019-40 [I,C\*]; C09K0019-40 [I,A]

US 5837160 IPCI C09K0019-52 [ICM,6]; C09K0019-32 [ICS,6]; C09K0019-34 [ICS,6]; F21V0009-00 [ICS,6]

IPCR C08G0083-00 [I,C\*]; C08G0083-00 [I,A]; C08L0101-00 [I,C\*]; C08L0101-12 [I,A]; C09D0005-29 [I,C\*]; C09D0005-29 [I,A]; C09D0017-00 [I,C\*]; C09D0017-00 [I,A]; C09K0019-00 [I,C\*]; C09K0019-00 [I,A]; C09K0019-38 [I,C\*]; C09K0019-38 [I,A]; C09K0019-40 [I,C\*]; C09K0019-40 [I,A]

NCL 252/299.010; 252/299.100; 252/299.610; 252/299.620; 252/582.000

ECLA C09K019/00; C09K019/38A2; C09K019/38B; C09K019/40F2

OS MARPAT 128:55685

AB Cholesteric liquid-crystal polymers containing  $\geq 1$  colored comonomer which absorbs visible light are described. The colored comonomers can be bifunctional hydroxy, amino, and/or carboxy derivs. of anthanthrone, anthraquinone, dioxazine, phthalocyanine, quinacridone, diketopyrrolopyrrole, perylene, perinone, azomethine, or azo pigments or aminostilbene carboxylic acids. Coatings containing such polymers show color effects dependent on viewing angle which cannot be achieved with absorption pigments alone or with cholesteric liquid-crystal polymer coatings.

ST chiral cholesteric liq crystal polymer; colored monomer cholesteric liq crystal polymer

IT Liquid crystals, polymeric  
Liquid crystals, polymeric  
(cholesteric, chiral; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyesters, preparation  
Polyesters, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamide-; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyimides, preparation  
Polyimides, preparation  
Polyimides, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamide-polyester-; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyesters, preparation  
Polyesters, preparation  
Polyesters, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamide-polyimide-; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyamides, preparation  
Polyamides, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyamides, preparation

Polyamides, preparation  
Polyamides, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyimide-; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Liquid crystals, polymeric  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyesters; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT Polyesters, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(sulfonate-group-containing; preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT 15793-73-4, C.I. Pigment Orange 34  
RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

IT 199849-41-7P 199849-42-8P 199849-43-9P 199849-44-0P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of chiral cholesteric liquid-crystal polymers containing colored monomers)

L25 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:616919 CAPLUS  
DN 127:312936  
ED Entered STN: 27 Sep 1997  
TI High-extinction polarizers comprising liquid crystal polymers  
IN Mortazavi, Mohammad; Yoon, Hyun Nam; Teng, Chia-chi  
PA Hoechst Celanese Corp., USA  
SO U.S., 8 pp.  
CODEN: USXXAM

DT Patent  
LA English  
IC ICM C09K019-52  
ICS C09K019-56; F21V009-14; G02F001-1335  
INCL 252299010  
CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 74, 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5667719	A	19970916	US 1995-459581	19950602
	JP 11506547	T	19990608	JP 1996-536525	19960520
PRAI	US 1995-459581	A	19950602		
	WO 1996-US7274	W	19960520		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5667719	ICM	C09K019-52
	ICS	C09K019-56; F21V009-14; G02F001-1335
	INCL	252299010
	IPCI	C09K0019-52 [ICM,6]; C09K0019-56 [ICS,6]; F21V0009-14 [ICS,6]; F21V0009-00 [ICS,6,C*]; G02F0001-1335 [ICS,6]; G02F0001-13 [ICS,6,C*]
	IPCR	C08J0005-18 [I,C*]; C08J0005-18 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0067-00 [I,C*];

C08L0067-03 [I,A]; C08L0069-00 [I,C\*]; C08L0069-00 [I,A]; C08L0071-00 [I,C\*]; C08L0071-12 [I,A]; C08L0073-00 [I,C\*]; C08L0073-00 [I,A]; C08L0075-00 [I,C\*]; C08L0075-04 [I,A]; C08L0077-00 [I,C\*]; C08L0077-10 [I,A]; C08L0077-12 [I,A]; C08L0101-00 [I,C\*]; C08L0101-12 [I,A]; C09K0019-50 [I,C\*]; C09K0019-50 [I,A]; G02B0005-30 [I,C\*]; G02B0005-30 [I,A]

NCL 252/299.010; 252/299.100; 252/299.400; 252/299.500; 252/585.000; 349/096.000

JP 11506547 IPCI G02B0005-30 [ICM,6]; C08J0005-18 [ICS,6]; C08K0005-00 [ICS,6]; C08L0067-03 [ICS,6]; C08L0067-00 [ICS,6,C\*]; C08L0069-00 [ICS,6]; C08L0071-12 [ICS,6]; C08L0071-00 [ICS,6,C\*]; C08L0073-00 [ICS,6]; C08L0075-04 [ICS,6]; C08L0075-00 [ICS,6,C\*]; C08L0077-10 [ICS,6]; C08L0077-12 [ICS,6]; C08L0077-00 [ICS,6,C\*]; C08L0101-12 [ICS,6]; C08L0101-00 [ICS,6,C\*]  
IPCR C09K0019-50 [I,A]; C09K0019-50 [I,C\*]; G02B0005-30 [I,A]; G02B0005-30 [I,C\*]

AB This invention provides high-extinction organic polarizers based on blends of novel liquid crystalline polymers and suitable dichroic dyes. The invention further provides a process to prepare such polarizers.

ST polarizer liq crystal polymer dichroic dye; display liq crystal polarizer dichroic dye

IT Dyes

RL: TEM (Technical or engineered material use); USES (Uses)  
(dichroic; high-extinction polarizers containing liquid crystal polymers

and)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(high-extinction polarizers containing dichroic dyes and)

IT Anthraquinone dyes

Azo dyes

RL: TEM (Technical or engineered material use); USES (Uses)  
(high-extinction polarizers containing liquid crystal polymers and)

IT Liquid crystal displays

(high-extinction polarizers containing liquid crystal polymers and dichroic dyes for)

IT Polarizers

(high-extinction; containing liquid crystal polymers and dichroic dyes)

IT 3818-60-8, Direct Blue 168

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Blue 168; high-extinction polarizers containing liquid crystal polymers and)

IT 2586-57-4, Direct Blue 22

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Blue 22; high-extinction polarizers containing liquid crystal polymers and)

IT 2503-73-3, Direct Blue 78

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Blue 78; high-extinction polarizers containing liquid crystal polymers and)

IT 6656-03-7, Direct Blue 98

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Blue 98; high-extinction polarizers containing liquid crystal polymers and)

IT 3626-36-6, Direct Orange 26

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Orange 26; high-extinction polarizers containing liquid crystal polymers and)

IT 2429-75-6, Direct Violet 12

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Violet 12; high-extinction polarizers containing liquid crystal polymers and)

IT 5489-77-0, Direct Violet 51

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Violet 51; high-extinction polarizers containing liquid crystal polymers and)

IT 6227-14-1, Direct Violet 9

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Violet 9; high-extinction polarizers containing liquid crystal polymers and)

IT 10130-29-7, Direct Yellow 8

RL: TEM (Technical or engineered material use); USES (Uses)  
(Direct Yellow 8; high-extinction polarizers containing liquid crystal polymers and)

IT 155507-58-7, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-6-hydroxy-2-naphthoic acid-resorcinol-terephthalic acid copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(high-extinction polarizers containing dichroic dyes and)

IT 1325-54-8, Direct Orange 39 2429-74-5, Direct Blue 15 2516-05-4, Methylene violet Bernthsen 2610-05-1, Direct Blue 1 2870-32-8, Direct Yellow 12 2945-96-2, Direct Black 17 3626-28-6, Direct Green 1 6252-62-6, Direct Brown 44 6428-31-5, Direct Black 19 6854-81-5, Direct Brown 106 8005-52-5, Direct Yellow 44 12217-65-1, Direct Orange 107 12222-14-9, Direct Blue 249 12222-29-6, Direct Brown 210 12222-56-9, Direct Violet 98 17418-58-5, Disperse Red 60 50925-42-3, Direct Yellow 86 54077-16-6, Disperse Yellow 56 54804-85-2, Direct Black 154 61724-93-4, Direct Orange 106 70563-36-9, Direct Yellow 87 71872-40-7, Direct Brown 195 71873-63-7, Direct Blue 90 72390-60-4, Direct Green 85 90249-26-6, Direct Blue 202 104491-84-1, Disperse Blue 214 110735-25-6, Direct Blue 151 129290-85-3, Direct Blue 236 197316-77-1, C.I. Direct Blue 270 197316-78-2, C.I. Direct Brown 242 197316-79-3, C.I. Direct Brown 247

RL: TEM (Technical or engineered material use); USES (Uses)  
(high-extinction polarizers containing liquid crystal polymers and)

L25 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:72304 CAPLUS

DN 126:96693

ED Entered STN: 01 Feb 1997

TI Polarizer films comprising wholly aromatic liquid crystalline polymers and dichroic dyes

IN Shen, Sunny S.; Yoon, Hyun-Nam; Mortazavi, Mohammad

PA Hoechst Celanese Corporation, USA

SO PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G02B001-08

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9638743	A1	19961205	WO 1996-US7281	19960520
	W: JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5672296	A	19970930	US 1995-460288	19950602
	EP 871906	A1	19981021	EP 1996-921219	19960520
	R: BE, DE, FR, GB, IT, NL				
	JP 11506220	T	19990602	JP 1996-536529	19960520
PRAI	US 1995-460288	A	19950602		
	WO 1996-US7281	W	19960520		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9638743	ICM	G02B001-08
	IPCI	G02B0001-08 [ICM,6]

IPCR C08J0005-18 [I,C\*]; C08J0005-18 [I,A]; C09K0019-38 [I,C\*]; C09K0019-38 [I,A]; C09K0019-60 [I,C\*]; C09K0019-60 [I,A]; G02B0005-30 [I,C\*]; G02B0005-30 [I,A]  
 US 5672296 ECLA C09K019/60; G02B005/30L  
 IPCI C09K0019-52 [ICM,6]; C09K0019-56 [ICS,6]; F21V0009-14 [ICS,6]; F21V0009-00 [ICS,6,C\*]; G02F0001-1335 [ICS,6]; G02F0001-13 [ICS,6,C\*]  
 IPCR C08J0005-18 [I,C\*]; C08J0005-18 [I,A]; C09K0019-38 [I,C\*]; C09K0019-38 [I,A]; C09K0019-60 [I,C\*]; C09K0019-60 [I,A]; G02B0005-30 [I,C\*]; G02B0005-30 [I,A]  
 NCL 252/299.010; 252/299.100; 252/299.400; 252/299.500; 252/585.000; 349/096.000; 428/001.310  
 EP 871906 IPCI G02B0001-08 [ICM,6]  
 IPCR C08J0005-18 [I,C\*]; C08J0005-18 [I,A]; C09K0019-38 [I,C\*]; C09K0019-38 [I,A]; C09K0019-60 [I,C\*]; C09K0019-60 [I,A]; G02B0005-30 [I,C\*]; G02B0005-30 [I,A]  
 JP 11506220 IPCI G02B0005-30 [ICM,6]; C08J0005-18 [ICS,6]; C09K0019-38 [ICS,6]; C09K0019-60 [ICS,6]; C08L0067-02 [ICS,6]; C08L0067-00 [ICS,6,C\*]  
 IPCR C09K0019-60 [I,A]; C09K0019-60 [I,C\*]; G02B0005-30 [I,A]; G02B0005-30 [I,C\*]  
 AB This invention provides novel liquid crystalline polymers which, when mixed with  
 a suitable dye and extruded, yields polarizer films with superior polarizing efficiency, transmittance, dichroic ratio, and thermal and humidity stability. The invention further provides a process to prepare such polymers and polarizer films therefrom.  
 ST polarizer arom liq polymer dichroic dye  
 IT Dyes  
 (dichroic; polarizer films comprising wholly aromatic liquid crystalline polymers and dichroic dyes)  
 IT Polarizers  
 (polarizer films comprising wholly aromatic liquid crystalline polymers and dichroic dyes)  
 IT Anthraquinone dyes  
 Azo dyes  
 RL: DEV (Device component use); USES (Uses)  
 (polarizer films comprising wholly aromatic liquid crystalline polymers and dichroic dyes)  
 IT 155507-58-7 185565-79-1 185565-80-4  
 185565-81-5 185565-82-6 185565-83-7  
 185565-84-8 185565-85-9 185565-86-0  
 185605-58-7  
 RL: DEV (Device component use); USES (Uses)  
 (polarizer films comprising wholly aromatic liquid crystalline polymers and dichroic dyes)  
 L25 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:826082 CAPLUS  
 DN 123:355117  
 ED Entered STN: 30 Sep 1995  
 TI Mesomorphic properties of four-ring systems bearing no terminal substituent  
 AU Miyajima, Nobuhiko; Matsunaga, Yoshio  
 CS Faculty of Science, Hokkaido University, Sapporo, 060, Japan  
 SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1995), 260, 499-510  
 CODEN: MCLCE9; ISSN: 1058-725X  
 PB Gordon & Breach  
 DT Journal  
 LA English

CC 75-11 (Crystallography and Liquid Crystals)  
 AB Temps. of the solid-nematic and nematic-isotropic transitions were measured for forty-eight diverse compds. bearing no terminal substituent. Four benzene rings are connected to each other by single C-C bond(s) and/or by carbonyloxy, azomethine, and azo groups. The consequence of any linking group placed centrally in a quaterphenyl mol. is a drastic suppression of the solid state stability. The nematic-isotropic transition is hardly affected by the introduction of an azo linkage and also by an azomethine one, whereas it is significantly depressed by a carbonyloxy linkage. The presence of two or three linking groups yields generally complex effects on the thermal behavior because of the marked interdependence of the effects of the linking groups. No efficiency order in promoting a nematic phase applicable to all the compds. could be established.  
 ST liq crystal four phenyl ring system  
 IT Liquid crystals  
 (four-ring systems with no terminal substituent)  
 IT Heat of transition  
 (of liquid crystals of four-ring systems with no terminal substituent)  
 IT 28358-56-7 60469-90-1 85800-06-2 114804-11-4 129049-97-4  
 171197-35-6 171197-36-7 171197-37-8 171197-38-9  
 171197-39-0 171197-40-3 171197-41-4 171197-42-5 171197-43-6  
 171197-44-7 171197-45-8 171197-46-9 171197-47-0 171197-48-1  
 171197-49-2 171197-50-5 171197-51-6 171197-52-7 171197-53-8  
 171197-54-9 171197-55-0 171197-56-1 171197-57-2 171197-58-3  
 171197-59-4 171197-60-7 171197-61-8 171197-62-9 171197-63-0  
 171197-64-1 171197-65-2 171197-66-3 171197-67-4 171197-68-5  
 171197-69-6 171197-70-9 171197-71-0 171197-72-1 171197-73-2  
 171197-74-3 171197-75-4 171197-76-5 171197-77-6  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (liquid crystal properties of)

L25 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:435932 CAPLUS  
 DN 123:86197  
 ED Entered STN: 23 Mar 1995  
 TI Manufacture of disazo pigment compositions for gravure printing inks  
 IN Takami, Hisanori; Fukuda, Tetsuo; Konuma, Takeshi; Aoki, Kazutaka  
 PA Dainichiseika Color Chem, Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C09B067-22  
 ICS C09B041-00; C09D011-02  
 CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06345988	A	19941220	JP 1993-163778	19930610
	JP 2825418	B2	19981118		
PRAI	JP 1993-163778		19930610		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06345988	ICM	C09B067-22
	ICS	C09B041-00; C09D011-02
	IPCI	C09B0067-22 [ICM,5]; C09B0067-00 [ICM,5,C*]; C09B0041-00 [ICS,5]; C09D0011-02 [ICS,5]
	IPCR	C09B0041-00 [I,C*]; C09B0041-00 [I,A]; C09B0067-00 [I,C*]; C09B0067-20 [I,A]; C09B0067-22 [I,A]; C09D0011-02 [I,C*]; C09D0011-02 [I,A]

OS MARPAT 123:86197



AB The title compns. giving inks with improved retort properties are manufactured by coupling tetrazo compds. of 3,3'-dichlorobenzidine or 3,3'-dimethoxybenzidine to acetoacetoanilides 0.5-30 mol% of which are substituted with MeCOCH<sub>2</sub>CONHXAY [X = (un)substituted benzene or naphthalene ring; Y = CO<sub>2</sub>H- or SO<sub>3</sub>H-containing (un)substituted benzene ring or naphthalene ring; A = NHCO, CONH, SO<sub>2</sub>NH, NHSO<sub>2</sub>]. Thus, 3,3'-dichlorobenzidine was tetrazotized, then mixed with o-acetoacetotoluidide and 4-(4'-acetoacetylaminobenzoylamino)benzenesulfonic acid, then coupled to give a disazo pigment composition, which was dispersed in NC varnish, then mixed with a polyurethane varnish to give a gravure ink, which when used in gravure printing on nylon films showed good bleeding resistance after heating in water at 100°.

ST disazo pigment gravure printing ink; bleeding resistant disazo pigment ink; azo pigment gravure printing ink

IT Pigments  
(disazo; preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT Polyamides, miscellaneous  
RL: MSC (Miscellaneous)  
(films, printing substrates; preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT Water-resistant materials  
(hot water bleeding resistant; preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT Inks  
(gravure, pigments; preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT 9003-07-0, Polypropylene  
RL: MSC (Miscellaneous)  
(films, printing substrates; preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT 5468-75-7P 5567-15-7P 165248-23-7P 165248-24-8P  
165248-25-9P 165248-26-0P 165248-27-1P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of disazo pigment compns. for gravure printing inks with good hot water bleeding resistance)

IT 91-94-1, 3,3'-Dichlorobenzidine 93-68-5, o-Acetoacetotoluidide  
119-90-4, 3,3'-Dimethoxybenzidine 4433-79-8 165248-18-0 165248-19-1  
165248-20-4 165248-21-5 165248-22-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(tetrazotization of benzidines and coupling reaction with acetoacetoanilides)

L25 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:701655 CAPLUS  
DN 121:301655  
ED Entered STN: 24 Dec 1994  
TI Thermosetting polyesters for powder coating compositions  
IN Tanabe, Hisaki; Takagawa, Ryozi; Eguchi, Yoshio  
PA Nippon Paint Co., Ltd., Japan  
SO U.S., 18 pp. cont.-in-part of U.S. Ser. No. 262,734, abandoned.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM C08G063-00  
INCL 528308000  
CC 35-5 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 42

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5306806	A	19940426	US 1990-560226	19900720
	JP 01098618	A	19890417	JP 1987-256488	19871012
	JP 01098619	A	19890417	JP 1987-256489	19871012

JP 01221469	A	19890904	JP 1988-48412	19880229
JP 02001768	A	19900108	JP 1988-135169	19880601
JP 2630357	B2	19970716		
PRAI JP 1987-256488	A	19871012		
JP 1987-256489	A	19871012		
JP 1988-48412	A	19880229		
JP 1988-135169	A	19880601		
US 1988-262734	B2	19881012		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5306806	ICM	C08G063-00
	INCL	528308000
	IPCI	C08G0063-00 [ICM,5]
	IPCR	C08G0063-00 [I,C*]; C08G0063-185 [I,A]; C08G0063-672 [I,A]; C09D0167-02 [I,A]; C09D0167-02 [I,C*]
	NCL	528/308.000; 525/418.000; 525/450.000; 525/534.000; 528/272.000; 528/296.000; 528/298.000; 528/299.000; 528/302.000; 528/308.100; 528/308.600
JP 01098618	IPCI	C08G0063-18 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-181 [I,A]; C08G0063-19 [I,A]; C08G0063-66 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]
JP 01098619	IPCI	C08G0063-18 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-181 [I,A]; C08G0063-19 [I,A]; C08G0063-66 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]
JP 01221469	IPCI	C09D0005-03 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-20 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]; C09D0003-72 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-16 [I,A]; C08G0063-20 [I,A]; C08G0063-685 [I,A]; C09D0005-03 [I,C*]; C09D0005-03 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]; C09D0175-06 [I,C*]; C09D0175-06 [I,A]
JP 02001768	IPCI	C09D0005-03 [ICM,5]; C08G0059-40 [ICA,5]; C08G0059-00 [ICA,5,C*]; C08G0063-02 [ICA,5]; C08G0063-672 [ICA,5]; C08G0063-685 [ICA,5]; C08G0063-00 [ICA,5,C*]; C09D0163-00 [ICA,5]
	IPCR	C08G0063-00 [I,C*]; C08G0063-672 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-40 [I,A]; C08G0063-02 [I,A]; C08G0063-12 [I,A]; C08G0063-18 [N,A]; C08G0063-685 [I,A]; C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C09D0005-03 [I,C*]; C09D0005-03 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]

AB A thermosetting polyester resin capable of forming an anisotropic molten phase comprises 50-100% mesogenic groups selected from multiple phenylene groups connected through direct bonds, azo, azoxy, azomethine, ester, or trans-vinylene linkages, or a 2,6-naphthylene group, the remaining 0-50 mol% being selected from p-, o-, or m-phenylene and trans-1,4-cyclohexylene, the end groups of the connected units being occupied by OH, CO<sub>2</sub>H, or their reactive derivs. and the sum of the acid value and the OH value being 10 to 200. A thermosetting polyester prepared from di-Me 4,4'-biphenyldicarboxylate and 1,9-nonanediol, having OH value 25 and mesogenic character, was crosslinked with Crelan UI, pulverized to powder, coated on tinplate, and baked at 230° for 20 min.

ST thermosetting polyester powder urethane coating; hydroxy polyester thermosetting blocked IPDI

IT Urethane polymers, preparation  
RL: PREP (Preparation)

(coatings, based on thermosetting mesogenic polyesters)

IT Polyesters, preparation  
RL: PREP (Preparation)  
(preparation of mesogenic thermosetting, for powder coatings)

IT Liquid crystals, polymeric  
(thermosetting polyesters, for powder coatings)

IT Coating materials  
(powder, thermosetting, mesogenic polyesters for)

IT 50602-05-6P 50900-69-1P 81192-68-9P 88189-21-3P 111409-89-3P  
123757-08-4P 123814-72-2P 123814-73-3P 123814-74-4P  
123814-75-5P 123814-76-6P 123814-77-7P 123814-78-8P 123814-79-9P  
123814-80-2P 123814-81-3P 123814-82-4P 123814-83-5P 123814-84-6P  
123814-85-7P 123814-86-8P 123814-88-0P, 2,6-  
Naphthalenedicarboxylic acid-1,9-nonanediol-trimethylolpropane copolymer  
123814-89-1P 123814-90-4P 123814-92-6P 124506-20-3P  
159294-57-2P 159294-58-3P 159294-62-9P 159294-63-0P  
159294-64-1P 159294-65-2P  
RL: PREP (Preparation)  
(preparation of mesogenic, for powder coatings)

IT 124011-89-8P 124011-90-1P 124011-91-2P 124011-92-3P  
124024-28-8P 159294-55-0P 159294-56-1P 159294-59-4P 159294-60-7P  
159294-66-3P 159294-67-4P 159294-68-5P 159294-69-6P 159294-70-9P  
159294-71-0P 159294-72-1P 159294-73-2P 159294-74-3P  
159294-75-4P  
RL: PREP (Preparation)  
(preparation of, as powder coating material)

IT 159294-61-8P  
RL: PREP (Preparation)  
(preparation of, coating material, powdered)

L25 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:107930 CAPLUS  
DN 120:107930  
ED Entered STN: 05 Mar 1994  
TI Synthesis and properties of polyesters having cyanoazobenzene units in the  
side chain  
AU Sato, Moriyuki; Hayakawa, Makoto; Nakagawa, Kazuo; Mukaida, Kenichi;  
Fujiwara, Hirofumi  
CS Fac. Eng., Muroran Inst. Technol., Muroran, 050, Japan  
SO Macromolecular Rapid Communications (1994), 15(1), 21-9  
CODEN: MRCOE3; ISSN: 1022-1336  
DT Journal  
LA English  
CC 35-5 (Chemistry of Synthetic High Polymers)  
AB Polyester-polyethers with cyanophenylazo-containing side-chains were prepared  
by  
melt polycondensation of di-Et 5-[6-[4-(4-cyanophenylazo)phenoxy]hexyloxy]  
isophthalate with X[C<sub>6</sub>H<sub>4</sub>O(CH<sub>2</sub>)<sub>6</sub>OH-p]<sub>2</sub> (X = O, CO, CH<sub>2</sub>, direct bond) as  
stable materials both for showing liquid-crystalline (LC) alignment and for  
generating a phase-conjugate wave. The thermotropic LC and optical  
properties of the polymers were examined  
ST liq crystal polyester cyanophenylazo contg; polycondensation isophthalate  
deriv diol; thermotropic polyester polyether  
IT Polyethers, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polyester-, [(cyanophenyl)azo]-containing, liquid crystals, preparation  
and thermotropic liq-crystalline and optical properties of)

IT Polyketones  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polyester-polyether-, [(cyanophenyl)azo]-containing, liquid  
crystals, preparation and thermotropic liq-crystalline and optical  
properties of)

IT Polyethers, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polyester-polyketone-, [(cyanophenyl)azo]-containing, liquid

crystals, preparation and thermotropic liq-crystalline and optical properties of)

IT Polyesters, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)  
(polyether-, [(cyanophenyl)azo]-containing, liquid crystals, preparation and thermotropic liq-crystalline and optical properties of)

IT Polyesters, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)  
(polyether-polyketone-, [(cyanophenyl)azo]-containing, liquid crystals, preparation and thermotropic liq-crystalline and optical properties of)

IT Liquid crystals, polymeric

(thermotropic, polyester-polyethers, with cyanoazobenzene-containing side-chains, preparation and thermotropic liq-crystalline and optical properties of)

IT 114043-49-1

RL: USES (Uses)  
(condensation of, with di-Et hydroxyisophthalate)

IT 618-83-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with ethanol)

IT 64-17-5, Ethanol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification with, of hydroxyisophthalic acid)

IT 39630-68-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and condensation of, with [(bromohexyloxy)phenylazo]benzonitrile)

IT 152969-89-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polymerization of, with diols)

IT 152969-93-2P 152969-94-3P 152969-95-4P 152969-96-5P

152969-98-7P 152969-99-8P 152970-01-9P 169133-35-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and thermotropic liq-crystalline and optical properties of)

L25 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:14941 CAPLUS

DN 120:14941

ED Entered STN: 08 Jan 1994

TI Manufacture of plastic lenses with dyes

IN Fukushima, Hiroshi; Motonaga, Akira

PA Mitsubishi Rayon Co, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM D06P003-00

ICS C08F002-44; C08F018-16; C08F018-18; C08L031-06; C08L031-08;  
D06P005-00; G02B001-04

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05195446	A	19930803	JP 1992-10298	19920123
PRAI	JP 1992-10298		19920123		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05195446	ICM	D06P003-00
	ICS	C08F002-44; C08F018-16; C08F018-18; C08L031-06; C08L031-08; D06P005-00; G02B001-04
	IPCI	D06P0003-00 [ICM,5]; C08F0002-44 [ICS,5]; C08F0018-16

IPCR [ICS,5]; C08F0018-18 [ICS,5]; C08F0018-00 [ICS,5,C\*];  
C08L0031-06 [ICS,5]; C08L0031-08 [ICS,5]; C08L0031-00  
[ICS,5,C\*]; D06P0005-00 [ICS,5]; G02B0001-04 [ICS,5]  
C08F0002-44 [I,C\*]; C08F0002-44 [I,A]; C08F0018-00  
[I,C\*]; C08F0018-14 [I,A]; C08F0018-16 [I,A];  
C08F0018-18 [I,A]; C08L0031-00 [I,C\*]; C08L0031-06  
[I,A]; C08L0031-08 [I,A]; D06P0003-00 [I,C\*];  
D06P0003-00 [I,A]; D06P0005-00 [I,C\*]; D06P0005-00  
[I,A]; G02B0001-04 [I,C\*]; G02B0001-04 [I,A]

AB A specific combination of dyes is added to polymerizing materials suitable for manufacturing plastic, transparent, durable, hard, and heat-resistant lenses. More than 1 dye selected from the group comprising Cobalt Blue, Ultramarine Blue, and phthalocyanine blue dyes, and  $\geq 1$  dye selected from quinaldine-type red and azo-type red dyes are added to  $\geq 1$  compound selected from aromatic diallyl esters, dimethacrylic esters and polymerized to give a material suitable for manufacturing lenses.

ST lens plastic dye additive

IT Dyes

(plastic lens manufacture with)

IT Lenses

(plastic manufacture of, with dyes)

IT 1345-16-0, C.I. Pigment Blue 28

RL: BIOL (Biological study)

(dye mixture containing, plastic lens manufacture with)

IT 151732-19-3

RL: BIOL (Biological study)

(plastic lens manufacture with)

IT 151779-84-9

RL: BIOL (Biological study)

(plastic lens manufacture with dyes and)

L25 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1990:79546 CAPLUS

DN 112:79546

ED Entered STN: 03 Mar 1990

TI Liquid crystalline thermosetting polyesters containing polyphenyldicarboxylic acids and powder coatings therefrom

IN Tanabe, Hisaki; Takagawa, Ryozi; Eguchi, Yoshio

PA Nippon Paint Co., Ltd., Japan

SO Eur. Pat. Appl., 40 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G063-18

ICS C08G063-66; C09D003-64

CC 42-8 (Coatings, Inks, and Related Products)

Section cross-reference(s): 25, 73

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 312331	A2	19890419	EP 1988-309548	19881012
	EP 312331	A3	19900816		
	EP 312331	B1	19950524		
	R: DE, GB				
	JP 01098618	A	19890417	JP 1987-256488	19871012
	JP 01098619	A	19890417	JP 1987-256489	19871012
	JP 01221469	A	19890904	JP 1988-48412	19880229
	JP 02001768	A	19900108	JP 1988-135169	19880601
	JP 2630357	B2	19970716		
	AU 8823620	A	19890413	AU 1988-23620	19881011
	AU 612707	B2	19910718		
PRAI	JP 1987-256488	A	19871012		
	JP 1987-256489	A	19871012		

JP 1988-48412           A       19880229  
 JP 1988-135169       A       19880601

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 312331	ICM	C08G063-18
	ICS	C08G063-66; C09D003-64
	IPCI	C08G0063-18 [ICM,4]; C08G0063-66 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]
	IPCR	C08G0063-00 [I,C*]; C08G0063-185 [I,A]; C08G0063-672 [I,A]; C09D0167-02 [I,A]; C09D0167-02 [I,C*]
	ECLA	C08G063/185; C08G063/672; C09D167/02
JP 01098618	IPCI	C08G0063-18 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-181 [I,A]; C08G0063-19 [I,A]; C08G0063-66 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]
JP 01098619	IPCI	C08G0063-18 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-181 [I,A]; C08G0063-19 [I,A]; C08G0063-66 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]
JP 01221469	IPCI	C09D0005-03 [ICM,4]; C08G0063-18 [ICS,4]; C08G0063-20 [ICS,4]; C08G0063-00 [ICS,4,C*]; C09D0003-64 [ICS,4]; C09D0003-72 [ICS,4]
	IPCR	C08G0063-18 [I,A]; C08G0063-00 [I,C*]; C08G0063-12 [I,A]; C08G0063-16 [I,A]; C08G0063-20 [I,A]; C08G0063-685 [I,A]; C09D0005-03 [I,C*]; C09D0005-03 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]; C09D0175-06 [I,C*]; C09D0175-06 [I,A]
JP 02001768	IPCI	C09D0005-03 [ICM,5]; C08G0059-40 [ICA,5]; C08G0059-00 [ICA,5,C*]; C08G0063-02 [ICA,5]; C08G0063-672 [ICA,5]; C08G0063-685 [ICA,5]; C08G0063-00 [ICA,5,C*]; C09D0163-00 [ICA,5]
	IPCR	C08G0063-00 [I,C*]; C08G0063-672 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-40 [I,A]; C08G0063-02 [I,A]; C08G0063-12 [I,A]; C08G0063-18 [N,A]; C08G0063-685 [I,A]; C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C09D0005-03 [I,C*]; C09D0005-03 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09D0167-00 [I,C*]; C09D0167-00 [I,A]
AU 8823620	IPCI	C08G0063-18 [ICM,4]; C08G0063-40 [ICS,4]; C08G0063-46 [ICS,4]; C08G0063-66 [ICS,4]; C08G0063-68 [ICS,4]; C08G0063-00 [ICS,4,C*]; C08L0067-02 [ICS,4]; C08L0067-00 [ICS,4,C*]; C08G0081-00 [ICS,4]; C08G0018-42 [ICS,4]; C08G0018-00 [ICS,4,C*]; C09D0005-03 [ICS,4]; C09D0003-66 [ICS,4]; C09D0003-70 [ICS,4]; C09D0003-72 [ICS,4]
	IPCR	C08G0063-00 [I,C*]; C08G0063-185 [I,A]; C08G0063-672 [I,A]; C09D0167-02 [I,A]; C09D0167-02 [I,C*]
AB	Thermosetting polyesters having sum of acid value and OH value (Vh) 10-200 and capable of forming anisotropic molten phases, useful for powder coatings with epoxy resins or aminoplasts, contain AXB units in which A = 50-100% mesogenic groups of $\geq 2$ benzene rings connected in their p-positions, a group in which $\geq 2$ benzene rings are connected with each other in their p-position through azo, azoxy, azomethine, ester, trans-vinylene, or 2,6-naphthylene) and 0-50% groups of o-, m-, p-phenylene or trans-1,4-cyclohexylene; B = (CH <sub>2</sub> ) <sub>n</sub> , (CH <sub>2</sub> CH <sub>2</sub> ) <sub>m</sub> , CH <sub>2</sub> CH <sub>2</sub> in which n = 2-20 and m = 1-19; and X = ester bond, with adjoining 2 repeating units connected through an ester bond, and end bondings of the connected repeating units occupied by OH, CO <sub>2</sub> H, or their reactive derivs. 4,4'-Diphenylcarboxylic acid-1,9-nonanediol copolymer showing Vh 25 and good anisotropic properties was mixed with Crelan UI ( $\epsilon$ -	

caprolactam-blocked IPDI) and Bu<sub>2</sub>Sn dilaurate, heated at 150°, cooled, pulverized, coated on a tin plate, and baked at 230° for 20 min to give a clear and smooth surface.

ST diphenyldicarboxylic acid polyester powder coating; anisotropic thermosetting polyester diphenyldicarboxylic acid; aminoplast polyphenyl polyester powder coating; epoxy polyphenyl polyester powder coating; liq crystal thermosetting polyphenyl polyester

IT Liquid crystals  
(polyphenyl polyesters, manufacture of anisotropic, for powder coatings)

IT Coating materials  
(electrostatic powder, polyesters containing polyphenyl units, anisotropic in molten phase, with aminoplast or isocyanate or epoxy resin hardener, thermosetting)

IT 25085-99-8 74313-83-0, Crelan U-I  
RL: USES (Uses)  
(anisotropic polyester powder coatings containing, thermosetting, storage-stable)

IT 50602-05-6 50900-69-1 81192-68-9 86129-21-7 88189-21-3  
111409-89-3 123757-08-4 123814-72-2 123814-73-3 123814-74-4  
123814-75-5 123814-76-6 123814-77-7 123814-78-8 123814-79-9  
123814-80-2 123814-81-3 123814-82-4 123814-83-5 123814-84-6  
123814-85-7 123814-86-8 123814-87-9 123814-88-0  
123814-89-1 123814-90-4 123814-91-5 123814-92-6  
123864-64-2 124506-20-3 125193-85-3 125193-86-4 125193-87-5  
RL: USES (Uses)  
(liquid crystalline, with anisotropic properties in molten phase, for preparing thermosetting powder coatings)

IT 123814-97-1 123814-98-2 123814-99-3 123815-00-9 124011-88-7  
124011-89-8 124011-90-1 124011-91-2 124011-92-3  
124011-93-4 124011-94-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(powdered coatings, smooth, clear)

IT 7440-31-5, Tin, uses and miscellaneous  
RL: USES (Uses)  
(powder coatings for, thermosetting liquid crystalline polyesters as)

IT 123814-93-7 123814-94-8 123814-95-9 123814-96-0  
123839-87-2 124024-28-8 125193-88-6  
RL: USES (Uses)  
(powder coatings, smooth, clear)

L25 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1982:218337 CAPLUS  
DN 96:218337  
ED Entered STN: 12 May 1984  
TI Preparation and properties of polybenzimidazoles containing azo groups  
AU Srinivasan, P. R.; Srinivasan, M.; Mahadevan, V.  
CS Dep. Chem., Indian Inst. Technol., Madras, 600 036, India  
SO Journal of Polymer Science, Polymer Chemistry Edition (1982), 20(4), 1145-50  
CODEN: JPLCAT; ISSN: 0449-296X  
DT Journal  
LA English  
CC 35-5 (Chemistry of Synthetic High Polymers)  
AB Six polybenzimidazoles containing azobenzene units were synthesized in 60-70% yield from 4,4'-azodibenzoic acid or its 3,3'-isomer and 3,3'-diaminobenzidine, bis(3,4-diaminophenyl) ether, or bis(3,4-diaminophenyl)methane. Data were given for their IR, UV, and visible absorptions, thermogravimetric and DTA analyses, d., solubility, and viscosity, and their spectra were compared with those of model compds. All the polymers decomposed at 380-415°. The polymers were soluble in concentrated H<sub>2</sub>SO<sub>4</sub>, and some were soluble in polar aprotic solvents; those polymers containing the 3,3'-linkage were more soluble than their 4,4'-isomers.

ST polybenzimidazole azo prepn property; soly azo  
polybenzimidazole; thermal stability azo polybenzimidazole;  
spectra azo polybenzimidazole; benzimidazole azo  
polymer

IT Ring closure and formation  
(in polymerization of azobenzenedicarboxylic acids with aromatic  
tetraamines,  
polybenzimidazoles by)

IT Polymerization  
(of azobenzenedicarboxylic acids with aromatic tetraamines, cyclization  
in)

IT Solubility  
Thermogravimetric analysis  
Ultraviolet and visible spectra  
(of polybenzimidazoles containing azobenzene moieties)

IT Heat-resistant materials  
(polybenzimidazoles containing azobenzene moieties)

IT Polymers, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polybenzimidazoles containing azobenzene moieties, preparation and  
properties of)

IT Azo compounds  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polymeric, benzimidazole ring-containing, preparation and phys. and thermal  
properties of)

IT Thermal analysis  
(differential, of polybenzimidazoles containing azobenzene  
moieties)

IT Isomerism and Isomers  
(positional, in polybenzimidazoles containing azobenzene  
moieties, phys. and thermal properties in relation to)

IT Amines, reactions  
(tetra-, aromatic, polymerization of, with azobenzenedicarboxylic acids,  
cyclization in)

IT 95-54-5, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclocondensation reaction of, with azodibenzoic acid)

IT 586-91-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclocondensation reaction of, with phenylenediamine)

IT 81843-27-8P 81843-28-9P 81843-29-0P 81843-30-3P 81843-31-4P  
81843-32-5P 81843-99-4P 81844-00-0P 81844-01-1P  
81844-02-2P 81844-03-3P 81844-04-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and phys. and thermal properties of)

IT 81907-49-5P 81907-50-8P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and spectra of)

L25 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1979:122972 CAPLUS

DN 90:122972

ED Entered STN: 12 May 1984

TI Polymeric quaternary ammonium salts

IN Haase, Jaroslav; Horn, Ulrich; Berendt, Hans Ulrich

PA Ciba-Geigy A.-G., Switz.

SO Ger. Offen., 62 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08G073-02

CC 39-7 (Textiles)

FAN.CNT 2

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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PI	DE 2824743	A1	19781221	DE 1978-2824743	19780606
	CH 638362	A3	19830930	CH 1977-7178	19770610
	CH 638362	B5	19840330		
	US 4247476	A	19810127	US 1978-911725	19780601
	DD 137350	A5	19790829	DD 1978-205841	19780607
	SU 890980	A3	19811215	SU 1978-2629400	19780607
	NL 7806242	A	19781212	NL 1978-6242	19780608
	GB 2000164	A	19790104	GB 1978-26563	19780608
	GB 2000164	B	19820217		
	BE 868001	A1	19781211	BE 1978-188476	19780609
	DK 7802583	A	19781211	DK 1978-2583	19780609
	SE 7806722	A	19781211	SE 1978-6722	19780609
	FR 2399451	A1	19790302	FR 1978-17373	19780609
	FR 2399451	B1	19821210		
	ES 471150	A1	19790901	ES 1978-471150	19780609
	AU 7836977	A	19791213	AU 1978-36977	19780609
	CA 1090363	A1	19801125	CA 1978-305172	19780609
	PL 113058	B1	19801129	PL 1978-207517	19780609
	JP 54004999	A	19790116	JP 1978-70290	19780610
PRAI	CH 1977-7178	A	19770610		

CLASS

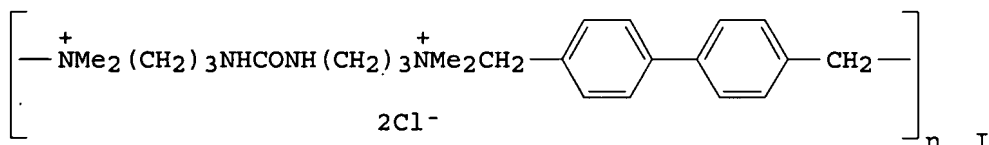
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2824743	IC	C08G073-02
	IPCI	C08G0073-02; C08G0073-00 [I,C*]; B01F0017-18; D06M0015-52
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
CH 638362	IPCI	D06M0015-12; D06P0001-52; D06P0001-66; D06P0001-44 [C*]
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
US 4247476	IPCI	C07C0101-26; C07C0101-68; C07C0103-54; C07C0127-15
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
	NCL	564/051.000; 008/639.000; 008/927.000; 210/729.000; 252/008.610; 524/612.000; 528/397.000; 528/422.000; 528/423.000; 534/573.000; 534/DIG.001; 544/059.000; 544/162.000; 544/163.000; 544/168.000; 546/174.000; 546/175.000; 546/186.000; 548/338.100; 549/076.000; 549/078.000; 549/079.000; 549/487.000; 558/027.000; 560/076.000; 560/084.000; 560/085.000; 560/088.000; 564/059.000; 564/156.000; 564/157.000; 564/160.000

DD 137350	IPCI	C07C0101-00; C07C0103-375 [ICA]; C07C0125-06 [ICA]; C07C0127-00 [ICA]; C07D0295-04 [ICA]; C07D0295-00 [ICA,C*]
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
SU 890980	IPCI	C08G0073-00
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
NL 7806242	IPCI	C08G0073-00; A61L0013-00; B01F0017-18; C09K0003-16; D06M0015-12
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
GB 2000164	IPCI	C08G0073-02; C08G0073-00 [C*]
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
BE 868001	IPCI	C08G
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
DK 7802583	IPCI	C08G
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]

		B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
SE 7806722	IPCI	C08G0073-00
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
FR 2399451	IPCI	C08G0073-00; B01F0017-18; D06P0001-66; D06P0001-44 [C*]; D06P0003-70
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
ES 471150	IPCI	C08G; D06M; D06N; A01N
AU 7836977	IPCI	C08G0073-02; C08G0073-00 [C*]; D06M0015-52; B01D0021-01; D06P0001-08; D06P0001-02 [C*]; D06P0003-76; D06P0003-70 [C*]; C02C0005-02; A61L0001-00
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
CA 1090363	IPCI	C07C0103-44; C07C0127-00; D06P0001-645; D06P0001-64 [C*]
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
PL 113058	IPCI	C08G
	IPCR	C08G0073-00 [I,A]; A01N0037-30 [I,C*]; A01N0037-30 [I,A]; A01N0037-44 [I,C*]; A01N0037-44 [I,A]; A01N0047-10 [I,C*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C*]; B01F0017-00 [I,A]; B01F0017-18 [I,C*]; B01F0017-18 [I,A]; C02F0001-54 [I,C*]; C02F0001-54 [I,A]; C08G0073-00 [I,C*]; C08G0073-02 [I,A]; D06M0013-00 [I,C*]; D06M0013-467 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]
JP 54004999	IPCI	C08G0073-00

IPCR C08G0073-00 [I,A]; A01N0037-30 [I,C\*]; A01N0037-30 [I,A]; A01N0037-44 [I,C\*]; A01N0037-44 [I,A]; A01N0047-10 [I,C\*]; A01N0047-12 [I,A]; A01N0047-20 [I,A]; A01N0047-22 [I,A]; A01N0047-28 [I,C\*]; A01N0047-28 [I,A]; A01N0047-30 [I,A]; B01F0017-00 [I,C\*]; B01F0017-00 [I,A]; B01F0017-18 [I,C\*]; B01F0017-18 [I,A]; C02F0001-54 [I,C\*]; C02F0001-54 [I,A]; C08G0073-00 [I,C\*]; C08G0073-02 [I,A]; D06M0013-00 [I,C\*]; D06M0013-467 [I,A]; D06P0001-44 [I,C\*]; D06P0001-52 [I,A]; D06P0001-66 [I,A]

GI



AB Quaternary ammonium polymers are prepared from organic dihalide, especially aromatic

dihalides, and amino derivs. of ureas, optionally mixed with other dyes and are useful as leveling agent and retarders for the dyeing of textiles. Thus, 0.2 mol 4,4'-bis(chloromethyl)biphenyl and 0.2 mol 1,3-bis(3-dimethylaminopropyl)urea were refluxed in 200 mL MeOH, giving a 100 g yield of ammonium polymer I [69420-66-2], having inherent viscosity 2.20 dL/g (25°, 0.5% weight/volume in MeOH). A polyacrylonitrile fabric (5 g) was immersed in 200 mL of dyeing liquid containing 0.01 g I, adjusted to pH 4 with AcOH, heated 20 min at 28°, mixed with a solution containing 0.015 g of a mixture of 3 cationic azo dyes, dyed 60 min at 98°, cooled to 60°, and washed, giving a level dyeing with excellent wetfastness.

ST aminopropylurea chloromethylbiphenyl polymn; quaternary ammonium polymer; leveling agent retarder dyeing

IT Ionene polymers

RL: USES (Uses)

(dye leveling agents and flocculants, manufacture of)

IT Flocculating agents

(ionene polymers as, for wastewater treatment)

IT Dyeing

(leveling agents and retarders for, quaternary ammonium polymers as)

IT Wastewater treatment

(of dyeing effluents, quaternary ammonium polymer coagulant for)

IT 69419-40-5P

RL: PREP (Preparation)

(manufacture of for dyebath additives and coagulants)

IT 69420-30-0P

RL: PREP (Preparation)

(manufacture of, for dye leveling agents and coagulants)

IT 69419-41-6P	69419-42-7P	69419-43-8P	69419-44-9P	69419-45-0P
69419-46-1P	69419-47-2P	69419-48-3P	69419-49-4P	69419-50-7P
69419-52-9P	69419-54-1P	69419-55-2P	69419-56-3P	69419-57-4P
69419-58-5P	69419-59-6P	69419-60-9P	69419-61-0P	69420-40-2P
69420-41-3P	69420-42-4P	69420-43-5P	69420-44-6P	69420-45-7P
69420-46-8P	69420-47-9P	69420-48-0P	69420-49-1P	69420-50-4P
69420-51-5P	69420-52-6P	69420-53-7P	69420-54-8P	69420-55-9P
69420-56-0P	69420-57-1P	69420-59-3P	69420-60-6P	69420-61-7P
69420-62-8P	69420-63-9P	69420-64-0P	69420-65-1P	69420-66-2P
69425-87-2P	69425-88-3P	69425-90-7P	69425-92-9P	69425-94-1P
69425-95-2P	69425-97-4P	69425-99-6P	69426-01-3P	
69426-03-5P	69426-04-6P	69426-05-7P	69426-06-8P	69426-07-9P
69426-08-0P	69426-09-1P	69426-10-4P	69426-96-6P	69494-95-7P
70537-83-6P				

RL: PREP (Preparation)  
(manufacture of, for dyebath additives and coagulating agents)

L25 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1976:6482 CAPLUS  
DN 84:6482  
ED Entered STN: 12 May 1984  
TI Disazo tetracarboxylic acid dyes  
IN Towle, Jack L.  
PA Chemetron Corp., USA  
SO Ger. Offen., 21 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C09B  
CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2511092	A1	19751002	DE 1975-2511092	19750313
	US 3951943	A	19760420	US 1974-451873	19740318
	CH 612210	A5	19790713	CH 1975-2330	19750225
	GB 1497437	A	19780112	GB 1975-10343	19750312
	JP 50126634	A	19751004	JP 1975-32131	19750317
	FR 2270239	A1	19751205	FR 1975-8447	19750318
	FR 2270239	B1	19790928		
PRAI	US 1974-451873	A	19740318		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2511092	IC	C09B
	IPCI	C09B0033-14
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0245-00 [I,C*]; C07C0245-08 [I,A]; C09B0033-00 [I,C*]; C09B0033-153 [I,A]; C09B0041-00 [I,C*]; C09B0041-00 [I,A]
US 3951943	IPCI	C09B0041-00
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0245-00 [I,C*]; C07C0245-08 [I,A]; C09B0033-00 [I,C*]; C09B0033-153 [I,A]; C09B0041-00 [I,C*]; C09B0041-00 [I,A]
CH 612210	NCL	534/581.000; 534/740.000; 534/748.000
	IPCI	C09B0033-14
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0245-00 [I,C*]; C07C0245-08 [I,A]; C09B0033-00 [I,C*]; C09B0033-153 [I,A]; C09B0041-00 [I,C*]; C09B0041-00 [I,A]
GB 1497437	IPCI	C09B0041-00; C09B0033-14
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0245-00 [I,C*]; C07C0245-08 [I,A]; C09B0033-00 [I,C*]; C09B0033-153 [I,A]; C09B0041-00 [I,C*]; C09B0041-00 [I,A]
JP 50126634	IPCI	C07C0107-06
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0245-00 [I,C*]; C07C0245-08 [I,A]; C09B0033-00 [I,C*]; C09B0033-153 [I,A]; C09B0041-00 [I,C*]; C09B0041-00 [I,A]
FR 2270239	IPCI	C07C0113-00
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*];

C07C0241-00 [I,A]; C07C0245-00 [I,C\*]; C07C0245-08  
[I,A]; C09B0033-00 [I,C\*]; C09B0033-153 [I,A];  
C09B0041-00 [I,C\*]; C09B0041-00 [I,A]

GI For diagram(s); see printed CA Issue.  
AB Disazotetracarboxylic acids (I, Z = 2,5-dichloro-p-phenylene,  
3,3'-dimethyl-4,4'-biphenylene) were prepared in >96% yield by coupling  
diazotized 2,3-(HO<sub>2</sub>C)2C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> [5434-20-8] with (MeCOCH<sub>2</sub>CONH)2Z in an aqueous  
tetrahydrofuran [109-99-9] solution Dehydration of the dicarboxylic acids  
gave the corresponding anhydrides and treatment with amines gave the  
corresponding carboximide derivs.  
ST disazo tetracarboxylic acid; azo coupling tetrahydrofuran  
solvent; aminophthalic acid azo coupling; acetoacetamide deriv  
azo coupling  
IT Coupling reaction  
(azo, of bis(acetoacetamido)aryl derivs. with diazotized  
aminophthalic acid, in aqueous tetrahydrofuran for improved yields)  
IT Pigments  
(bis([(dicarboxyphenyl)azo]acetoacetamido)arenes, manufacture of)  
IT 5434-20-8  
RL: USES (Uses)  
(coupling of diazotized, with bis(acetoacetamido)arenes in presence of  
tetrahydrofuran)  
IT 91-96-3 42487-09-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with diazotized aminophthalic acid in presence of  
tetrahydrofuran)  
IT 57532-26-0P 57532-27-1P 57532-28-2P 57532-29-3P  
57532-30-6P 57532-31-7P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
IT 106-47-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with disazo tetracarboxylic acid derivative)  
IT 603-11-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reduction of)  
IT 109-99-9, uses and miscellaneous  
RL: USES (Uses)  
(solvents, diazotized aminophthalic acid coupling with  
bis(acetoacetamido)arenes in)  
IT 57-13-6, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with disazo tetracarboxylic acid derivative)

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(FILE 'HOME' ENTERED AT 15:33:13 ON 03 JUL 2007)

FILE 'CAPLUS' ENTERED AT 15:33:25 ON 03 JUL 2007

L1 0 S US 2004-019684/PN  
L2 1 S US 2004-0191684/PN  
L3 1 S US 2004-0029038/PN

FILE 'REGISTRY' ENTERED AT 15:35:02 ON 03 JUL 2007

FILE 'CAPLUS' ENTERED AT 15:35:13 ON 03 JUL 2007

L4 TRA L2 1- RN : 14 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:13 ON 03 JUL 2007

L5 14 SEA L4

FILE 'CAPLUS' ENTERED AT 15:35:17 ON 03 JUL 2007

L6 TRA L3 1- RN : 16 TERMS

FILE 'REGISTRY' ENTERED AT 15:35:17 ON 03 JUL 2007

L7 16 SEA L6  
L8 14 S L4  
L9 4 S (L8 OR L5) AND BIPHENYL  
L10 14 S L4  
L11 0 S (L10 OR L5) AND CAYANOBIPHENYL  
L12 14 S L4  
L13 2 S (L12 OR L5) AND CYANOBIPHENYL  
L14 14 S L4  
L15 4 S (L14 OR L5) AND (CYANOBIPHENYL OR BIPHENYL)

FILE 'CAPLUS' ENTERED AT 15:36:15 ON 03 JUL 2007

L16 18904 S L4  
L17 1243 S L16 AND (AZO OR AZOBENZENE OR POLYESTER)  
L18 690 S L16 AND (AZO)

FILE 'REGISTRY' ENTERED AT 15:37:19 ON 03 JUL 2007

L19 2 S L15 AND BENZENEDICARBOXYLIC  
L20 3151 S (BIPHENYL OR CYANOBIPHENYL) AND BENZENEDICARBOXYLIC

FILE 'CAPLUS' ENTERED AT 15:39:59 ON 03 JUL 2007

L21 5 S L19  
L22 3840 S L20  
L23 2725 S L22 AND (AZO OR AZOBENZENE OR POLYESTER)  
L24 34 S L22 AND (AZO OR AZOBENZENE)  
L25 31 S L24 NOT L21

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
125.58	241.84

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS).

SINCE FILE	TOTAL
ENTRY	SESSION
-28.08	-28.08

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 15:42:00 ON 03 JUL 2007

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2293	mesogen\$4 near5 (moiety or group)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:23
L2	1561	polyester\$6 same ((optical or laser or information) near5 (medium or media or disk or disc))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:24
L3	22	l1 and l2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:35
L4	361	berneth.in. and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 15:22
L5	14	l1 and l4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:38
L6	5	jp-2000514468-\$.did. or jp-10212324-\$.did. or jp-2002539476-\$.did. or "6441113". pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:39
L7	2	jp-2000514468-\$.did. or jp-2002539476-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:40
L8	3999	(minabe or kawano or meruyama or yasuda or matsui or ishii or hama).in. and polyester	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:41
L9	11	(minabe or kawano or meruyama or yasuda or matsui or ishii or hama).in. and (poly adj2 ester)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:51



## EAST Search History

L10	333039	((optical or laser or information) near5 (medium or media or disk or disc)).ti, ab.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:43
L11	70	l10 and (l9 or l8)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:43
L12	32	l11 and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:37
L13	625	(minabe or kawano or meruyama or yasuda or matsui or ishii or hama).in. and (biphenyl)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:52
L14	653	(minabe or kawano or meruyama or yasuda or matsui or ishii or hama).in. and (biphenyl or cyanobiphenyl)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:53
L15	15	l10 and l14	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:53
L16	6	l15 not l11	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:52
L17	164503	(minabe or kawano or meruyama or yasuda or matsui or ishii or hama).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:54
L18	3623	l10 and l17	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:53
L19	14	l18 and mesogen\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:54

## EAST Search History

L20	201683	(minabe or kawano or maruyama or yasuda or matsui or ishii or hama).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:54
L21	177451	(minabe or kawano or maruyama or yasuda or matsui or ishii or hama).in.	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:54
L22	3685	l21 and l10	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:08
L23	114	l22 and (polymer or azo or mesogen\$6)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:55
L24	66	l23 and @ad<"20030324"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:08
L25	2992	l22 and @ad<"20030324"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:57
L26	2437	l22 and @ad<"20000324"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:57
L27	555	l25 not l26	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 13:57
L28	255	l21 and hologra\$6	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:08
L29	150	l28 and @ad<"20030324"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:35
L30	1231	"hot press" near5 (process or method or technique)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:36
L31	48	l30 same substrate	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:36
L32	37	l31 and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:36
L33	3614	"hot press" near5 (process or method or technique)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:36

## EAST Search History

L34	48	I33 same substrate	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:37
L35	373	I33 same substrate	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:39
L36	259	I35 and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:39
L37	54	I35 same vacuum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 14:39
L38	26	I37 and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 15:21
L39	1	us-20040191684-\$.did. and mesogen\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 15:22
L40	69	(azo or azobenzene) near5 mesogen\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 15:22
L41	42	I40 and @ad<"20030324"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/03 15:23